

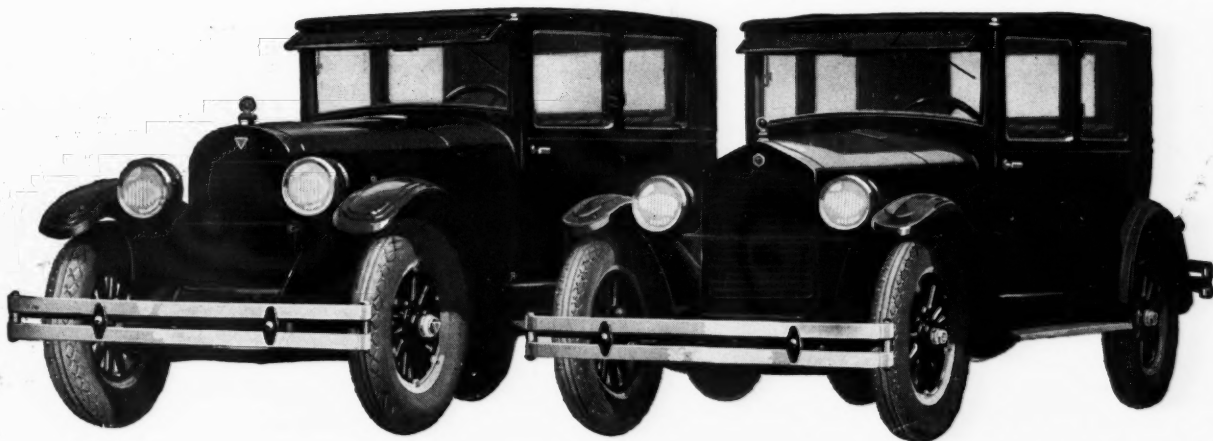
In This Issue—New Records Made in Year's Racing

MOTOR AGE

Vol. XLIX
Number 14

PUBLISHED WEEKLY AT 5 SOUTH WABASH AVENUE
CHICAGO, APRIL 8, 1926

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This is a "Six" year. Hudson-Essex are the most wanted and largest selling "Sixes" in the world. Now they take a new and greater advantage over competition in A. Y. D. (At Your Door) prices quoted by dealers on equipped cars.

This line has proved for years the most satisfactory and profitable for the dealer to sell, as well as the "World's Greatest value" to buyers.

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Transmission Lock (Built in)
Radiator Shutters Moto-Meter
Combination Stop
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HUDSON MOTOR CAR COMPANY, DETROIT, MICH.

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\$7.85

**Attractive Discounts
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*CV is a Bonney
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Chrome Vanadium
registered
August 11, 1925.



Six Bonney *CV Chrome Vanadium double
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in attractive leatherette kit. These six
wrenches will fit the following:

U.S. STANDARD NUTS	S. A. E. NUTS	HEX. CAP SCREWS
1/4", 5/16", 3/8", 7/16", 1/2"	1/4", 5/16", 3/8", 7/16", 1/2", 9/16", 5/8", 11/16"	3/16", 1/4", 5/16", 3/8", 7/16", 1/2", 5/8", 3/4"

(In cardboard box without leatherette
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Bonney Forge & Tool Works
Allentown, Pa:

Makers of Special Service Wrenches of Chrome Vanadium, Carbon
Steel Drop Forged Wrenches, Stillson Wrenches, Vises and Drop
Forgings and the Bonney Rim Tool.

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Chrome **CV** Vanadium
WRENCHES

(Patents Pending)

Bonney Forge & Tool Works
ALLENTOWN, PA.

Please send me one of your No. 25
Engineer's Kits for which I am attaching
remittance of \$7.85.

Name _____

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The **BUICK** *Franchise means* **Better** **Used Cars**

No car maintains its resale value at a higher point, throughout the country, than Buick. New or used Buicks enjoy wide public preference because they stand up and stay good through years of service. 100,000 of the million and more Buicks in use today are 8 years old, or older.

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the Better **BUICK**

BUICK MOTOR COMPANY, FLINT, MICHIGAN

Division of General Motors Corporation

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Branches in all Principal
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WHEN BETTER AUTOMOBILES ARE BUILT, BUICK WILL BUILD THEM

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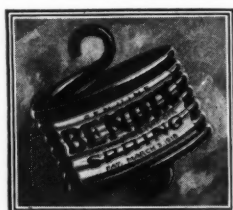
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ECLIPSE MACHINE COMPANY, HOBOKEN, N. J.

ECLIPSE MACHINE COMPANY, Ltd., WALKERVILLE, ONTARIO

Eclipse Machine Company
Elmira, New York
Department 7

MAIL THIS COUPON

Please send at once your useful Service Bulletins on the Eclipse Bendix Drive; also name of nearest distributor of Genuine Parts for the Eclipse Bendix Drive.

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Address _____

City _____

MOTOR AGE

Reg. U. S. Pat. Office

Vol. XLIX

No. 14

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CONTENTS

Holds His Own Show.....	9
American Race Drivers Establish New World's Records in 1925	10
Europe's Fours and Sixes to Compete with America's Eights 14 By W. F. Bradley	
Modern Equipment Gives Speedy Lubrication.....	16
By B. M. Ikert	
Paige-Detroit Offers New Brougham at \$1,295.....	18
Beautiful Dealer Building Rises from Earthquake Ruins.....	18
Rest Room an Aid to Business.....	19
New Accessories for Dealers to Sell.....	20
MOTOR AGE'S Picture Page.....	21
Flat Rate Forum.....	22
The Reader's Clearing House.....	23
New Shop Equipment Items.....	28-29
Editorial	31
News of the Industry.....	32-43
Trade Association Activities.....	42
New Automotive Literature.....	36
Specifications	44
CLASSIFIED ADVERTISING SECTION.....	79
INDEX TO ADVERTISERS.....	80-81

MOTOR AGE is published every Thursday by

CHILTON CLASS JOURNAL COMPANY

Mallers Building, 5 South Wabash Avenue, Chicago
 C. A. MUSSELMAN, President and General Manager
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 Telephone: Central 7045

OFFICES

New York—U. P. C. Bldg., 239 West 39th St.; Phone Pennsylvania 0080.

Detroit—7338 Woodward Ave.; Phone Empire 4890.

Cleveland—540 Guardian Bldg.; Phone Main 6860.

Philadelphia—56th and Chestnut Sts.; Phone Sherwood 1424.

Indianapolis—519 Merchants Bank Bldg.; Phone Riley 3212.

Owned by United Publishers Corporation, 239 West 39th Street, New York; CHARLES G. PHILLIPS, President; A. C. PEARSON, Vice-President; FRITZ J. FRANK, Treasurer, H. J. REDFIELD, Secretary.


SUBSCRIPTION RATES: United States, Mexico and U. S. Possessions, \$3.00 per year; Canada, \$5.00 per year; all other countries in Postal Union, \$6.00 per year; single copies, 35 cents.

Member of the Audit Bureau of Circulations.

Member, Associated Business Papers, Inc.

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Subscriptions accepted only from the Automotive Trade
 Entered as Second Class Matter, Sept. 19, 1899, at the Post Office at
 Chicago, Ill., under Act of March 3, 1879



21 Plus Points of Superiority

Any one of its many points of superiority would make it better than most hoists, but think how much greater its 21 plus points of superiority make it than all others.

Write for details

1. TIMKEN TAPERED ROLLER BEARINGS
Eight to each trolley.
2. STEEL SIDE PLATES
Bumpers protect wheel flanges and treads.
3. CHILLED TREAD WHEELS
Absolute roundness insures ease in handling load.
4. STEEL EQUALIZING PIN
Permits placing trolley on I-Beam at any point and insures equal distribution of the load on the four wheels.
5. STEEL HANGER PLATE
May be eliminated and hook hung on equalizing pin to save headroom.
6. UPPER STEEL HOOK—DROP FORGED—PROOF TESTED
The strongest part of the hoist. This hook never opens to drop the hoist and load.
7. STEEL DROP FORGED CROSS HEAD
8. SAFETY LOAD CHAIN GUARD
Completely shrouds the upper half of load wheel, holding six links of load chain in wheel at all times.
9. STEEL LOAD WHEEL
Special analysis electric steel casting, annealed.
10. OIL TUBES
To insure positive and easy lubrication at vital points.
11. MAIN DRIVING SPINDLE AND PINION
Upset forging S.A.E. steel 1035—heat treated.
12. BRONZE BUSHED LOAD SHEAVE
13. BALL BEARING DRIVING SPINDLE
Where speed is greatest. Not subjected to heavy and shock loads. Eliminates wear on this part.
14. STEEL SUSPENSION PLATES
An extra precaution to care for heavy overloads.
15. NON FOULING HAND CHAIN GUIDE
(Malleable iron)
16. GEAR COVER—EXTRA HEAVY
Pressed from 3/8 plate. Insures permanency.
17. STEEL CHAIN—ELECTRIC WELDED
Special heat treated and proof tested. An elastic limit 4 1/2 times rated capacity, and breaking strength 6 1/2 times rated capacity.
18. LOWER STEEL HOOK—DROP FORGED—PROOF TESTED
Never opens to drop the load.
19. DETACHABLE STEEL COUPLING — DROP FORGED
Completely enclosed Ball Bearing. Easily detachable to renew chain. Load is NOT held on connecting bolts but by the forgings.
20. BALL THRUST BEARING ON BOTTOM SWIVEL HOOK
Permits easy swiveling of load. Insures load chain hanging straight and feeding perfectly straight into load sheave pockets. This insures longer life to chain and wheel the greatest point of friction and wear.
21. OIL CUPS SPRING COVER IN ALL OIL HOLES

WRIGHT
 MANUFACTURING COMPANY
 LISBON, OHIO

HIGH SPEED HOIST UNIT

Ask Us About Them

Manufactured and sold in Canada by Riley Engineering & Supply Co., Ltd.,
 360 Dufferin St., Toronto 3, Canada.

Why are 1923 cars worth so much less than 1924?

by

F. E. Moskovics

President

STUTZ MOTOR CAR COMPANY
OF AMERICA, Inc.

INDIANAPOLIS

YOU know that the market value of the average 1923 model is far below that of the average 1924 model—that there is a much greater difference in value than one year's difference in date of production would ordinarily mean.

The answer, of course, is that 1924 saw the general adoption of four-wheel brakes and balloon tires, which made 1923 cars not merely old, but practically obsolete.

History is about to repeat itself between the cars of 1926 conventional chassis design and those of 1927, 1928, and thereafter.

For the advanced chassis engineering ushered in by The NEW STUTZ, achieving a much lower center of gravity and thereby accomplishing greater safety and roadability, has established new standards.

Already, in the planning of future models, other important manufacturers in The NEW STUTZ price-class are copying the basic features of NEW STUTZ chassis design.

For instance, while The NEW STUTZ is the only American automobile today embodying the worm-gear drive, various makers of this type of drive have recently received orders from fourteen other American passenger-car makers for worm-gear drives for experimental purposes.

The NEW STUTZ dealer is in the highly advantageous position of being able to offer his customers in 1926 the one fine car that incorporates the engineering of the future rather than that of the past.

He is providing his patrons with a very real sort of insurance against excessive depreciation of their investment.

It is no wonder then, that sales of The NEW STUTZ are exceeding all estimates and that competitive salesmen are desperately trying to convince the public that The NEW STUTZ is experimental—despite the unanimous endorsement of NEW STUTZ design by leading American and European engineers, and despite the general acceptance of NEW STUTZ leadership by other manufacturers in the fine car field.

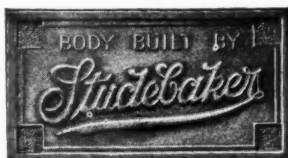
(Signed)

F. E. Moskovics



5 reasons why the
Studebaker franchise
grows more valuable
every day.

*One-Profit Value
Unit-Built Construction
Always Kept Up-to-Date
Used Car Pledge
Lowest Time-Payment Rates*



*This symbol means that Studebaker prices do not
include the profits of outside body-makers*

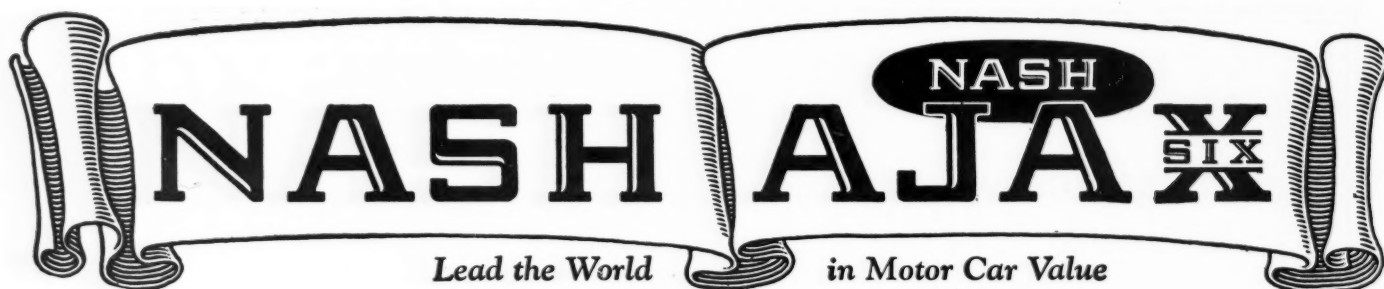
“Hitch your wagon to a star.” In the roll call of manufacturers in the first ten positions in the last twelve years—only five have been listed twelve times. Studebaker is one of the five.

Studebaker is one of the five automobile manufacturers that built 89% of all American cars produced in 1925.

That's why bankers consider the Studebaker dealer a “good risk.”

The Studebaker Corporation of America
South Bend, Indiana

T H I S I S A S T U D E B A K E R Y E A R



March! 16,265 Cars

Greatest Nash Month— Greatest Ajax Month

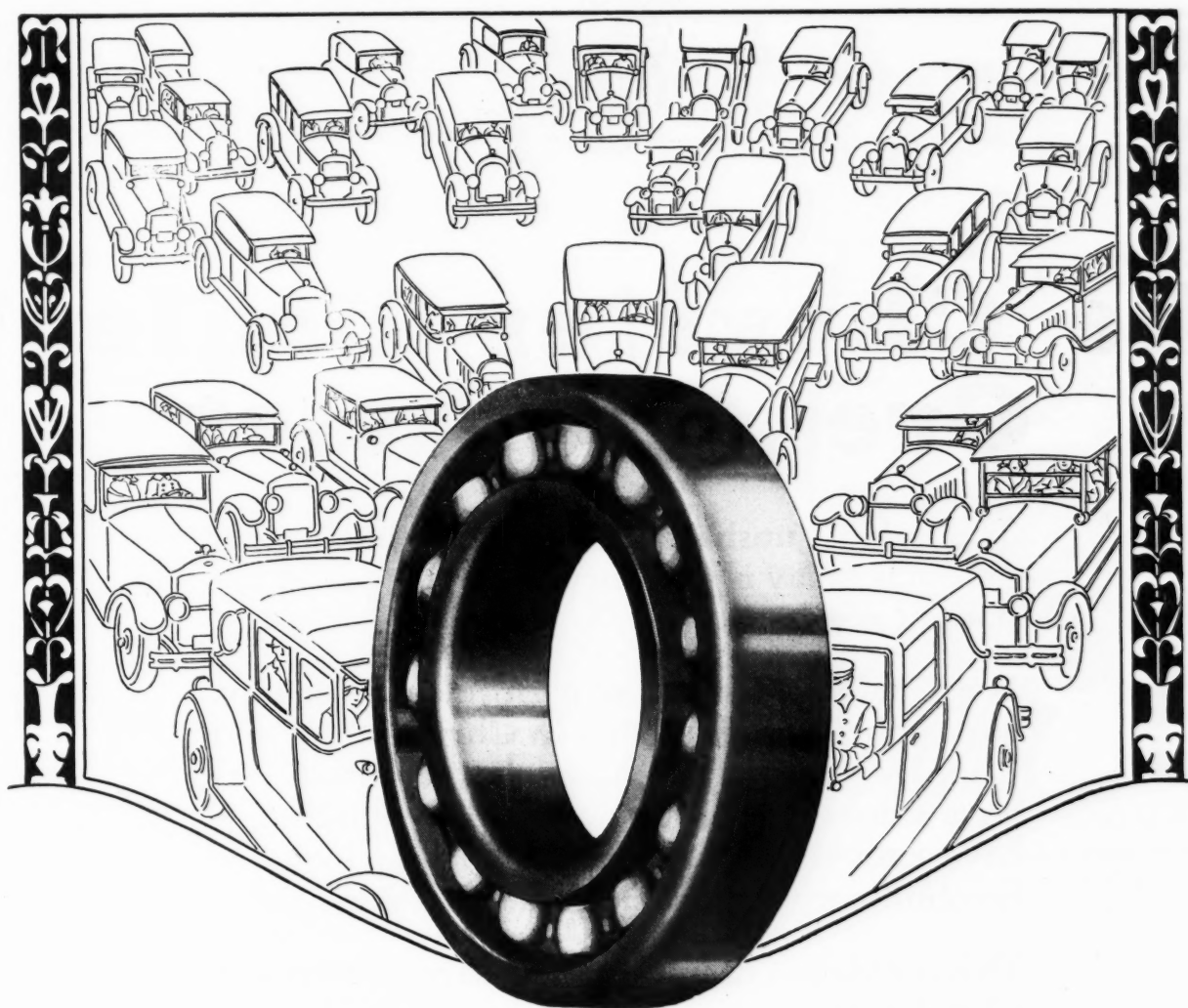
February—with Nash-Ajax sales totaling 14,148 cars—set a new high mark for both Nash and Ajax—but March with 16,265 cars swept beyond even that great record.

And still factory production was not sufficient to fill additional bona fide March orders for 1518 cars.

For Nash it was the 19th consecutive month that sales have exceeded the figure achieved by the corresponding month of the previous year—except for November, 1925, when production was slowed up to bring into manufacture the new “Enclosed Car” motor.

This great and growing national trend among buyers toward Nash and Ajax cars is assuming the proportions of a veritable landslide.

All because Nash-Ajax means greater *Quality*, greater *Value*, and far finer *Performance*—and people can't be told otherwise. *It is only too apparent when you look at the cars.*



A LIST of the motor cars which use New Departure Ball Bearings reads like a "Who's Who" of the industry. 88.5% of the passenger car builders use this quality product for 1926.

The recognized fact that New Departures are worth more—do more, last more, than other anti-friction types, has made builders willing to *pay more* to obtain these advantages:

—care-free dependability and a life span equal to the car itself—a constant and permanently accurate support of gears and shafts—and without readjustment, ever!

Think what this means in important bearing positions in out-of-the-way places like clutches, transmissions, rear axles, etc., where the cost of *getting at* a bearing to adjust or replace it is often more than the cost of the bearing itself.

New Departures are satisfaction insurance.

THE NEW DEPARTURE MANUFACTURING COMPANY
 Detroit Bristol, Connecticut Chicago

New Departure
QUALITY
Ball Bearings



The Chrysler Dealer's Greatest Asset

The public's unshakable confidence in Chrysler products today is the Chrysler dealer's most important asset.

For Chrysler results in performance, quality, appearance and durability in Chrysler "70" and Chrysler "58",—which other manufacturers have vainly striven for two years to duplicate—have caused the motoring public to look for revolutionary achievements in Chrysler cars.

This conviction of unprecedented results in each Chrysler product is rapidly winning for Chrysler Imperial "80" a position of prominence among the very finest cars.

This conviction of unprecedented results in each Chrysler product is now winning for Chrysler Imperial "80" a position of leadership among the very finest cars.

*Your inquiry will be held in
strictest confidence*

CHRYSLER SALES CORPORATION, DETROIT, MICHIGAN
CHRYSLER CORPORATION OF CANADA, LIMITED, WINDSOR, ONT.

CHRYSLER

Holds His Own Show

*Dealer in Small City Stages Three-Day Exhibition
Displaying All Passenger Car Models in His
Line, Making Many Sales and Building
Up Valuable Prospect List*

AN automobile show never fails to attract the public. Making use of this known fact, the Range Motor Co., Dodge Brothers dealer at Johnson City, Tenn., staged a show of its own March 18, 19 and 20, which gave decided impetus to the spring selling season in that territory.

Johnson City is a town about 15,000 population and the Range Motor Co. has three counties for its territory. This exhibition was extensively advertised in advance in the newspapers as an automobile show that would be worth seeing and the president, Harry G. Range, saw to it that advance promises were lived up to.

The entire building was used for the show, the shop being moved temporarily into an adjoining building. The walls and floors were made immaculately clean and handsome decorations were provided.

The full line of Dodge Brothers passenger cars and four models of Graham Brothers trucks were displayed.

A nickel plated Dodge Brothers chassis made for show purposes was obtained from the factory. A factory representative was on hand.

A contest was conducted in which a prize of a diamond

ring valued at \$150 was given. This contest was open only to those who attended the show and who filled out a card answering the following questions:

Name and address?

Have you seen all the cars shown here?

Which one of our cars appeals to you most?

How soon will you consider a new car?

Do you now own a car?

Make? Type? Year?

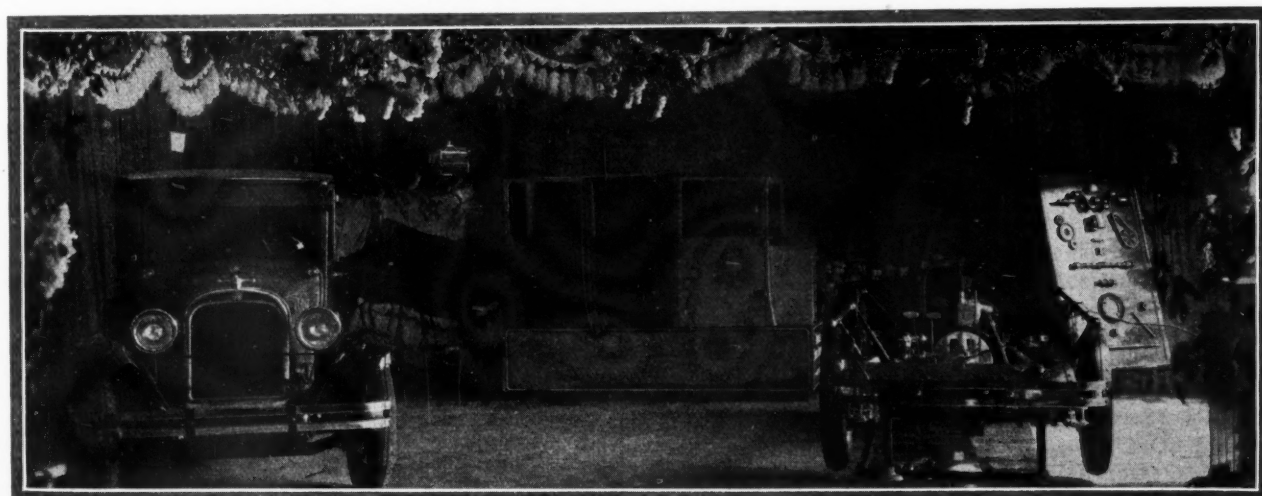
Souvenirs were given, flowers to adults and toy Dodge Brothers cars and Graham Brothers trucks to children.

It was estimated that in the three days between 6500 and 7000 persons visited the show, and of these 4500 registered as a result of the prize contest.

As a result of this show a number of immediate sales were made, many orders for future delivery were taken and a highly valuable prospect list for spring and summer work was obtained.

A dealer in almost any city may capitalize the show idea, putting on his own display according to the plans outlined here, details of which were kindly given to MOTOR AGE by Mr. Range.

A view of the show that Range Motor Co. held in Johnson City, Tenn.



101 Business Building Ideas That Have Made Money for Automotive Merchants Will Be Published in the Sales and Service Reference Number of MOTOR AGE, May 6, 1926



Speed Goes Up In Swift

*How Pete De Paolo, Whirlwind of the
Tracks, Forced Record After Rec-
ord Down in 1925 Season
and Won \$90,000*

By PAUL C. POMMER

FRANK ELLIOTT

*Winner of record-breaking race at
Los Angeles (Culver City) Nov. 29,
1925*

THE mad race for the title of World's Champion Racing Driver of 1925 developed the greatest year in the history of automobile racing. Its story, in a great measure, is the story of the rise to fame of one Peter De Paolo, and Peter in his flying Duesenberg proved without a doubt his right to be called the Speed King of the year.

In the winning of this goal new world's records were established at almost every one of the major events only to be replaced by greater miles per hour at the next succeeding race meet. When the season began Tommy Milton's 250 mile record of 126.885 miles per hour, estab-

lished at the new Culver City (Los Angeles), Speedway on March 1, was considered the quintessence of speed, yet Frank Elliott, in the November 29 race on the same track, raised this record to 127.87 miles per hour only to again have it shattered at the opening race of the new Miami-Fulford Speedway on February 22 of this year, where Peter De Paolo established a record of 129.53. (Since this was written a record of better than 130 miles per hour for 250 miles was made by Bennett Hill at Culver City.)

These figures go to show not only the constant improvement in car construction, which comes through

\$290,000 Prize Money Awarded Championship Drivers During 1925

Los Angeles, Cal. (March 1).....	\$25,000
Fresno, Cal. (April 30).....	15,000
Charlotte, N. C. (May 11).....	25,000
Indianapolis, Ind. (May 30).....	50,000
Altoona, Pa. (June 13).....	25,000
Laurel, Md. (July 11).....	25,000
Altoona, Pa. (Sept. 7).....	25,000
Laurel, Md. (Oct. 26).....	25,000
Salem, N. H. (Oct. 31).....	25,000
Charlotte, N. C. (Nov. 11).....	25,000
Los Angeles, Cal. (Nov. 29).....	25,000
	\$290,000

American Automobile Association Final Championship Standing—December 1, 1925

DRIVER	POINTS	DRIVER	POINTS
1—De Paolo	3260	14—Kreis	117
2—Milton	1735	15—Bennett Hill	75
3—Hartz	1640	16—DeVore	56
4—McDonough	1510	17—Hill, James	55
5—Cooper	935	18—Bordino	54
6—Elliott	880	19—De Palma	46
7—Lewis	465	20—Shattuck	45
8—Comer	459	21—Evans	45
9—Hepburn	381	22—Mourre	11
10—Shafer	315	23—Johnson	10
11—Batten	250	24—Corum	10
12—Duray	200	25—Spooner	10
13—Wonderlich	155	26—Morton	5



Remarkable panorama of Culver City race on Nov. 29, 1925. Photo by courtesy of Pictorial California

Automobile Racing Championship Contest

the lessons learned in the heat of these racing battles, but also in a measure improvements in speedway construction. A fact not generally known to the average layman is that several of these speed cars are owned or maintained by passenger car and accessory manufacturers and are used for experimental work, the knowledge gained thereby to be incorporated in their commercial products as improvements and new models offered to the public.

The qualities developed by Peter De Paolo in his mount constitute one of the secrets of his success. De Paolo had fewer pit stops than any other driver for the year, in fact went through most of them without a stop—his feat of completing the entire gruelling 300 miles at Miami-Fulford for a world's record of 129.29 miles per hour stamped him not only the champion driver but champion mechanic. His remarkable performance in winning

How Championship Points Were Distributed During 1925

DRIVER	Los Angeles 3/1/25	Fresno 4/30/25	Charlotte 5/11/25	Indianapolis 5/30/25	Altoona 6/13/25	Laurel 7/11/25	Altoona 9/7/25	Laurel 10/26/25	Salem, N. H. 10/31/25	Charlotte 11/11/25	Los Angeles 11/29/25	TOTAL
De Paola	260	300	50	890	500	500	260	500	500	500	25	3260
Milton	500	160	140	90	140	40	140	140	80	260	260	1735
Hartz	140	20	260	140	80	140	260	500	25	80	260	1640
McDonough	80	5	35	25	260	500	500	500	25	80	260	1510
Cooper	25	30	500	.....	.....	.....	140	50	140	.....	50	935
Elliott	.....	10	.....	.....	260	60	.....	.....	.....	50	500	880
Lewis	15	.....	.....	450	.....	.....	.....	.....	.....	.....	.....	465
Comer	.....	15	80	.....	29	80	80	.....	.....	35	140	459
Hepburn	.....	.....	.....	.....	10	6	80	260	25	.....	.....	381
Shafer	.....	.....	25	215	.....	5	25	35	10	.....	.....	315
Batten	.....	.....	.....	110	.....	.....	35	.....	25	80	.....	250
Duray	.....	90	.....	45	.....	.....	50	.....	.....	15	.....	200
Wonderlich	.....	.....	.....	.....	.....	.....	.....	.....	15	140	.....	155
Kreis	50	.....	.....	27	35	5	.....	.....	.....	.....	.....	117
Hill, Bennett	.....	50	.....	.....	.....	.....	.....	25	.....	.....	.....	75
DeVore	.....	.....	.....	.....	15	6	.....	.....	35	.....	.....	56
Hill, James	.....	.....	.....	.....	5	50	.....	.....	.....	.....	.....	55
Bordino	35	.....	.....	19	.....	.....	.....	.....	.....	.....	.....	54
De Palma, Ralph	.....	.....	.....	40	.....	6	.....	.....	.....	.....	.....	46
Shattuck	.....	.....	.....	35	.....	.....	.....	.....	5	5	.....	45
Evans	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	35	45
Mourre	.....	.....	.....	11	.....	.....	.....	.....	.....	.....	.....	11
Johnson	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10
Corum	.....	.....	.....	10	.....	.....	.....	.....	.....	.....	.....	10
Spooner	.....	.....	.....	.....	.....	.....	10	.....	.....	.....	.....	10
Morton	.....	.....	.....	.....	.....	.....	5	.....	.....	.....	.....	5

the Indianapolis Memorial Day event at the heretofore unthought of speed of 101.13 miles per hour for the 500 miles is only another example of his preparation for his remarkable feat.

No races were held on the Kansas City Speedway during 1925, this track having been dismantled. New board speedways were constructed, however, at Laurel, Md., and Salem, N. H., and another track at Ful-

ford-by-the-Sea, near Miami, Fla., held its inaugural race February 22, 1926. A fourth one is now in course of construction near Atlantic City, N. J., which is scheduled to open May 1. This is to be a one and one-half mile board track, the largest of its kind in the world, and is being built on a safety factor of 160 miles per hour.

The high speed board "bowl type" of speedway has firmly established itself as the most popular track, due largely to the fact that cars can maintain such thrill-

Recognized Speedway Records

The recognized Speedway Records of the Contest Board to March 15, 1926, for stock or non-stock cars for various distances from 1 to 500 miles are shown here.

Dis. Miles	Time	Miles per hr.	Driver	Car	Place	Date
1	40.23	89.55	De Palma	Mercedes	Des Moines	June 24, '16
2	1:09.37	104.	L. Chevrolet	Frontenac	Chicago	Sept. 3, '17
3	1:54.31	94.40	Resta	Peugeot	Des Moines	June 24, '16
4	2:14.22	107.60	L. Chevrolet	Frontenac	Chicago	Sept. 3, '17
5	2:14.60	133.70	De Paolo	Duesenberg	Culver City	Apr. 19, '25
10	4:25.20	136.	De Paolo	Duesenberg	Culver City	Apr. 19, '25
15	6:35.60	136.70	De Paolo	Duesenberg	Culver City	Apr. 19, '25
20	8:50.40	135.80	De Paolo	Duesenberg	Culver City	Apr. 19, '25
25	11:06.60	135.01	De Paolo	Duesenberg	Culver City	Apr. 19, '25
50	22:11.00	135.23	Hartz	Miller	Culver City	Apr. 19, '25
75	34:01.00	132.29	Cooper	Junior "8"	Culver City	Nov. 29, '25
100	45:40.00	131.39	Cooper	Junior "8"	Culver City	Nov. 29, '25
150	1:08:41.88	131.	DeVore	Miller	Miami	Feb. 22, '26
200	1:31:19.10	131.40	DeVore	Miller	Miami	Feb. 22, '26
250	1:55:48.10	129.53	De Paolo	Duesenberg	Miami	Feb. 22, '26
300	2:19:12.95	129.29	De Paolo	Duesenberg	Miami	Feb. 22, '26
350	3:24:42.99	102.56	Anderson	Stutz Spc.	Sheepsh'd Bay	Oct. 9, '15
400	3:56:30.19	101.16	Lewis	Junior "8"	Indianapolis	May 30, '25
450	4:28:00.10	101.16	De Paolo	Duesenberg	Indianapolis	May 30, '25
500	4:56:39.46	101.13	De Paolo	Duesenberg	Indianapolis	May 30, '25

Note.—All of the above are competitive records, established during the running of races. The rules of the Contest Board specify that all records under five miles must be electrically timed and, as practically all of the speedway races are held on tracks of one and one-quarter miles or over in length, no special effort has been made to establish new records under five miles. However, speeds of as high as 140 miles per hour for a single mile have been unofficially recorded on these speedways.

ing speed on them and again because all of the cars are in view of the spectators all of the time. Of these board tracks, the one at Fresno, California, is a one mile oval, that at Laurel $1\frac{1}{8}$ miles, those at Culver City, Calif., Altoona, Pa., Salem, N. H., Charlotte, N. C., and Miami-Fulford, Fla., $1\frac{1}{4}$ miles in length, and at Atlantic City $1\frac{1}{2}$ miles in length. The $2\frac{1}{2}$ mile brick track at Indianapolis, however, still maintains its prestige as the home of the country's greatest sporting event, its Memorial Day attendance of 145,000 in 1925 topping the largest crowd of any other gathering of sport fans.

While most of the board speedways are constructed to safely allow speeds up to 140 miles per hour, still the racing cars have become relatively much faster. The supercharger has added ten to twenty miles an hour to the speed of these cars, and with the other improvements has made it possible to attain a speed of 145 miles per hour. However, this applies to the 122 cu. in. cars that

were used during 1925 but which are to be replaced on May 31, 1926, by the new $91\frac{1}{2}$ cubic inch motors.

The use of these smaller motors will cause a drop of speed at first, mainly because the governing body of automobile racing, the Contest Board of the American Automobile Association, has ruled that the new cars must carry the same minimum weight as the 122's, that is, 1400 lbs. However, noted racing car manufacturers predict that within six months the $91\frac{1}{2}$ cubic inch cars will be bettering the present records.

The only speedway fatality of 1925 occurred at Los Angeles at the closing event of the year, an unavoidable accident resulting in the death of Raymond Cairens. This record can be attributed largely to the improvements made in the safety devices incorporated in track construction as demanded by the rules of the governing body of automobile racing.

Sixteen Championship Events in 1926

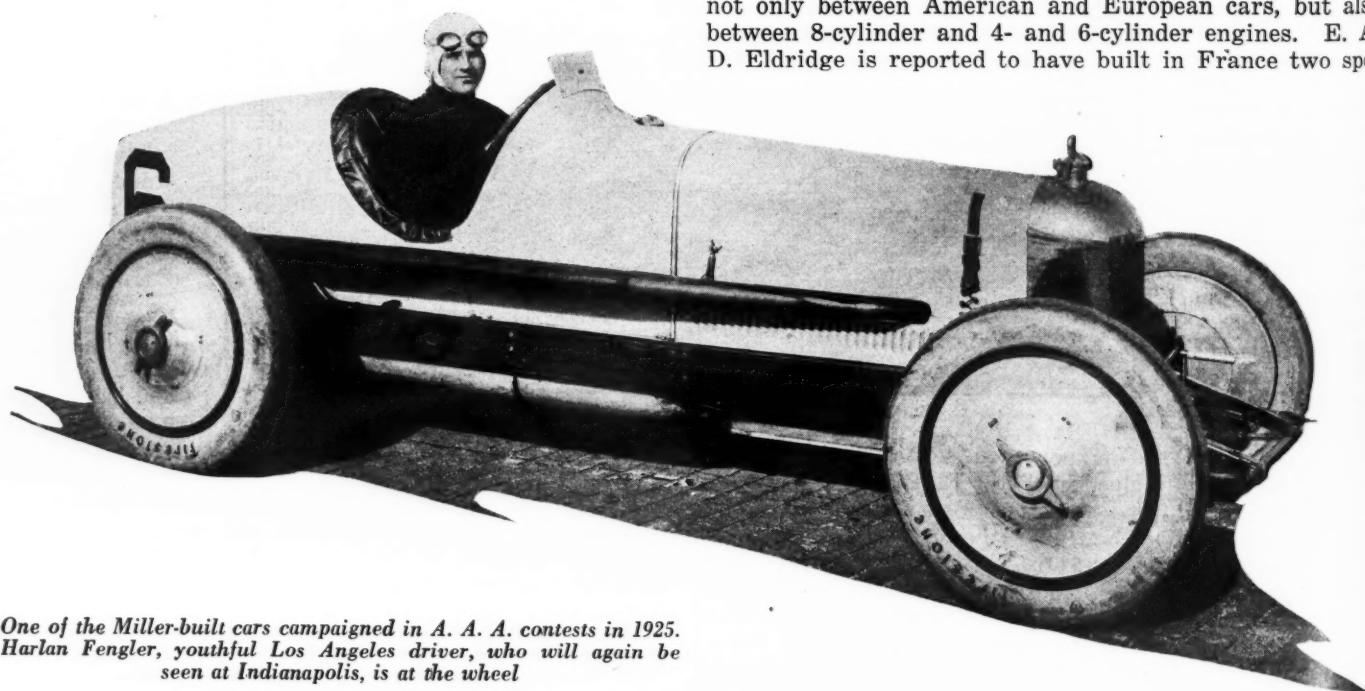
Eleven championship events were run in 1925 as compared to 8 in 1924. Sixteen are scheduled for the coming year. In 1924, \$225,000 was distributed in prize money to the drivers in the championship class. In 1925 the Contest Board distributed \$290,000 to these speed marvels. Peter De Paolo is estimated to have earned close to \$90,000 during the past season in prize money and extra money awarded.

What the season of 1926 will bring forth is still problematic, but with the advent of the new $91\frac{1}{2}$ cubic inch motors some startling and revolutionary developments are looked for—at least the rumblings are already being heard by those who are close to the inner circles of the sport.

It is expected that extraordinary interest will center on the Memorial day race at Indianapolis, which will be held on the Monday following Memorial day. The whole automotive world already is speculating upon the showing that the $91\frac{1}{2}$ cu. in. engines will do. These small engines installed in chassis of virtually the same size used for the 122 inch job are as yet untried on American tracks.

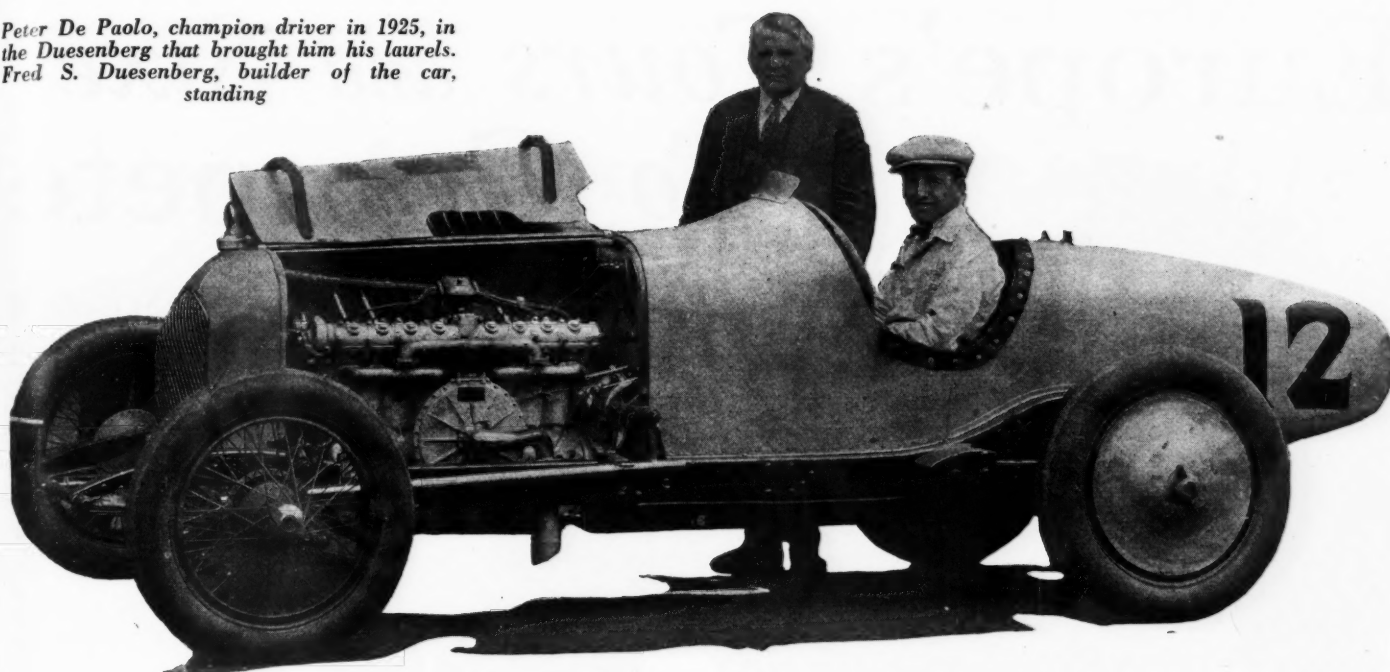
Interest will be further stimulated by the variety of car entered if advance plans are carried out. Already two important European entries are scheduled to provide competition for the American built Millers and Duesenbergs.

This competition, if it develops as promised, will be not only between American and European cars, but also between 8-cylinder and 4- and 6-cylinder engines. E. A. D. Eldridge is reported to have built in France two spe-



One of the Miller-built cars campaigned in A. A. A. contests in 1925. Harlan Fengler, youthful Los Angeles driver, who will again be seen at Indianapolis, is at the wheel

Peter De Paolo, champion driver in 1925, in the Duesenberg that brought him his laurels. Fred S. Duesenberg, builder of the car, standing



cial cars for entry at Indianapolis, having 4-cylinder engines.

H. Albert Schmidt, an American, has built three cars in France which are scheduled for the Indianapolis tilt. These have 6-cylinder engines of the Argyll sleeve valve type.

As is well known, the Miller and Duesenberg racing

engines have 8 cylinders. The cars which finished first in the 1925 races were either Duesenberg or Miller Specials. The Millers were designed and built by Harry A. Miller of Los Angeles, known for many years as one of the greatest builders of racing cars. The Duesenbergs were built by Fred S. and August Duesenberg at Indianapolis, men equally well known in the racing field.

Results of 1925 Championship Events Position in Which Each Driver Finished at Each Event

Los Angeles, Cal., March 1, 1925—250 Miles

Driver	Car	Time	Average M.P.H.
Milton	Miller	1:58:13.00	126.885
De Paolo	Duesenberg		
Hartz	Miller		
McDonough	Miller		
Kreis	Duesenberg		
Bordino	Fiat		
Cooper	Miller		
Lewis	Miller		
Johnson	Johnson		

Fresno, Cal., April 30, 1925—150 Miles

Driver	Car	Time	Average M.P.H.
De Paolo	Duesenberg	1:25:49.00	104.8
Milton	Miller		
Duray	Miller		
Hill	Miller		
Cooper	Miller		
Hartz	Miller		
Comer	Miller		
Elliott	Miller		
McDonough	Miller		

Charlotte, N. C., May 11, 1925—250 Miles

Driver	Car	Time	Average M.P.H.
Cooper	Miller		
Hartz	Miller		
Milton	Miller		
Comer	Miller		
De Paolo	Duesenberg		
McDonough	Miller		
Shafer	Duesenberg		

Indianapolis, Ind., May 30, 1925—500 Miles

Driver	Car	Time	Average M.P.H.
De Paolo	Duesenberg	4:56:39.47	101.13
Lewis-Hill	Junior "8"		
Shafer			
Morton	Duesenberg		
Hartz	Miller		
Milton	Miller		
Duray			
Comer	Miller		
De Palma-			
Corum	Miller		

Kreis-	Batten	Duesenberg
Shattuck	Miller	
Bordino-	Mourre	Fiat
Comer-Vail	Miller	
Elliott-	Halbe	Miller

Altoona, Pa., June 13, 1925—250 Miles

Driver	Car	Time	Average M.P.H.
De Paolo	Duesenberg	2:09:45.10	115.9
Elliott	Miller		
Milton	Miller		
Hartz	Miller		
Comer	Miller		
Kreis	Duesenberg		
McDonough	Miller		
DeVore	Miller		
Hepburn	Miller		
Jimmie Hill	Miller		

Laurel, Md., July 11, 1925—250 Miles

Driver	Car	Time	Average M.P.H.
De Paolo	Duesenberg	2:01:37.00	123.33
McDonough	Miller		
Hartz	Miller		
Comer	Miller		
Jimmie Hill	R. & J.		
Milton	Miller		
DeVore-			
De Palma-			
Hepburn	Miller		
Shafer-			
Kreis	Duesenberg		

Altoona, Pa., Sept. 7, 1925—250 Miles

Driver	Car	Time	Average M.P.H.
McDonough	Miller	2:06:54.54	118.4
Hartz	Miller		
Cooper	Junior "8"		
Comer	Miller		
Duray	Miller		
Batten	Miller		
Shafer	Miller		
Spooner-			
Morton	Duesenberg		

Laurel, Md., Oct. 26, 1925—250 Miles

McDonough	Miller	1:59:02.70	126.3
De Paolo	Duesenberg		
Milton	Miller		
Hepburn	Miller		
Cooper	Junior "8"		
Shafer	Miller		
Bennett Hill	Miller		

Salem, N. H., Oct. 31, 1925—250 Miles

Driver	Car	Time	Average M.P.H.
De Paolo	Duesenberg	1:59:45.50	125.2
Hepburn	Miller		
Cooper	Junior "8"		
Hartz	Miller		
McDonough-			
Milton	Miller		
DeVore	Nickel Plate		
Batten	Miller		
Wonderlich	Miller		
Shafer	Miller		
Shattuck	Miller		

Charlotte, N. C., Nov. 11, 1925—250 Miles

Driver	Car	Time	Average M.P.H.
Milton	Duesenberg	2:00:41.67	124.28
Hartz	Miller		
Wonderlich	Miller		
Batten	Miller		
Elliott	Miller		
Comer	Miller		
Hepburn	Miller		
Duray	Miller		
Evans	Miller		
Shattuck	Miller		
Kreis	Duesenberg		

Los Angeles, Cal., Nov. 29, 1925—250 Miles

Driver	Car	Time	Average M.P.H.
Elliott	Miller	1:57:18.20	127.87
Hartz	Miller		
Comer	Miller		
McDonough	Miller		
Cooper	Junior "8"		
Evans	Miller		
Milton	Duesenberg		

Europe's *Fours and Sixes* To Compete

Eldridge and Schmidt
France for This Year's
Have Fewer Cylinders
Duesen

By W. F.



Views of Guyot Special to be raced at Indianapolis this year. Top: Front view showing centrally placed steering gear; Circle: The gas tank forms a part of the body; Center right: Albert Schmidt, entrant, and Albert Guyot, builder; Lower right: Intake side of Guyot Special showing Roots supercharger and water pump.

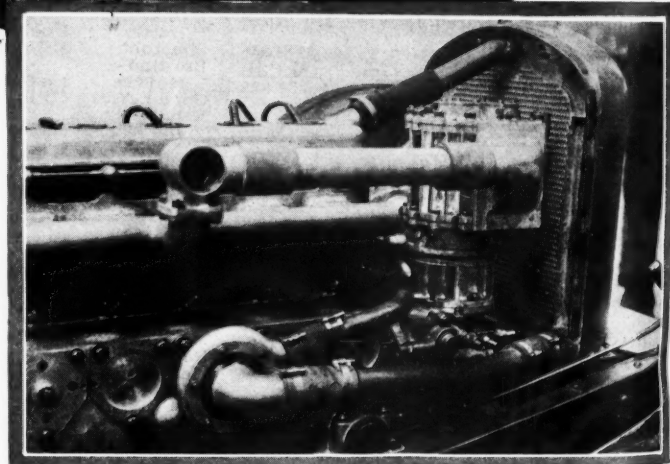
THIS year's 500 mile Indianapolis Race, as is pretty generally known, will be for cars with a minimum weight of 1400 lbs. and engines not over 91½ cu. in. piston displacement.

At the present time the race car builders in this country are busy working on their cars which are in various stages of completion. Out on the Pacific Coast is Harry Miller superintending the work on the Miller Specials and Indianapolis is buzzing with the activities of the Duesenberg brothers as well as the Chevrolet brothers, the latter building the Hamlin front drive job.

Over in Europe some of the same activity is going on regarding cars intended to be raced over the Indianapolis oval this year in the 500 mile classic.

The three Guyot specials, owned by Mr. H. Albert Schmidt, of Hunt Creek, Lewiston, Mich., and built in the shops of Albert Guyot, at Paris for the Indianapolis race are distinctive in having a six-cylinder single sleeve valve engine of the Burt McCullum type, world rights for which recently were obtained by Continental Motors Corp.

In these cars the frame is narrow, the steering is centrally placed, and the driver is in the middle, in contrast to the European practice of placing him to one side of a 31-inch body.



Two perfectly straight frame members, with a kick-up over the front axle, are made use of. The engine, which is a unit with the clutch and gearbox, has two trunnion attachments to the top of the frame members at the front and a third trunnion attachment under the gearbox to a central cross frame member. This attempt to insulate the power plant against weaving of the frame members has been carried out consistently, for the clutch and brake operating gear are mounted on the unit without any connection to the frame, the steering gear is placed on the top of the clutch housing and the change speed lever is on the top of the gearbox. Sheet aluminum is bolted up to the underside of the frame members, thus giving a perfectly flat under surface from end to end.

The Guyot engine has six cylinders of 60.6 by 86 mm.

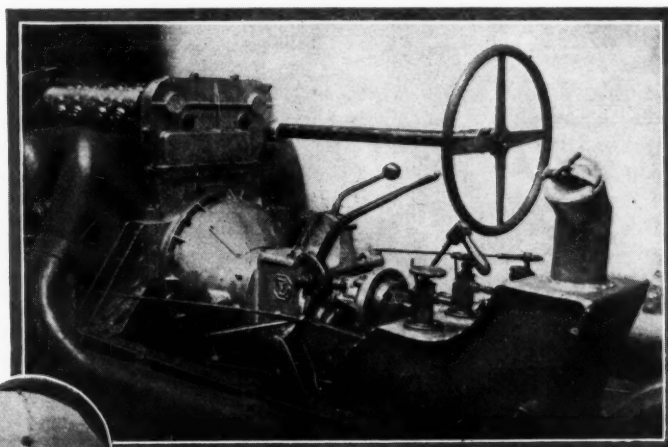
Motor Age

with America's Eights

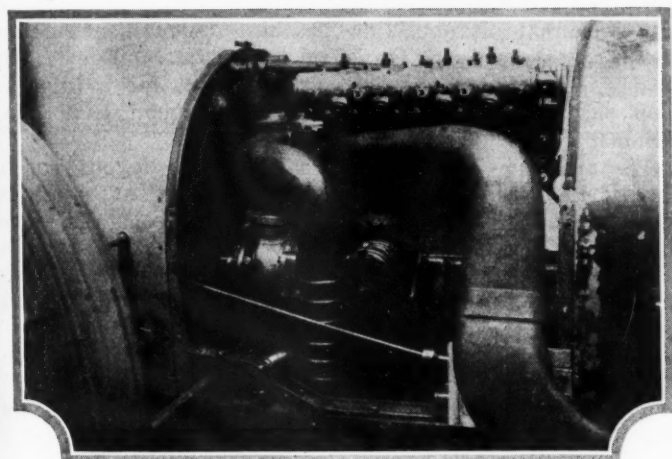
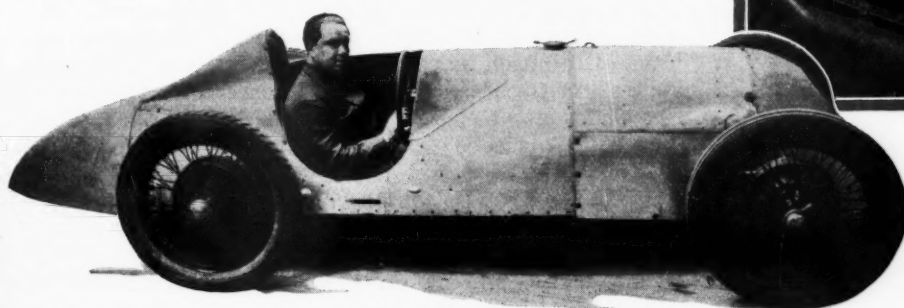
Specials Built in Indianapolis Race Than Millers and bergs

Bradley

2.38x3.38 ins.) bore and stroke, the cylinders being an iron casting mounted on an aluminum crankcase divided horizontally. Under the Burt McCullum patents, a single



Views of Eldridge Special, entered at Indianapolis. Upper right: Horizontal steering gear, oil tank on left of driver. The exhaust pipe is fastened to the side rail; Center: The car ready for the track; Bottom left: A view of the exhaust pipe, and intake pipe passing under the engine to intake valve on right hand side.



manifold. In addition to the high pressure lubrication assured by a scavenger and a feed pump, with a supply of oil under the cowl and an oil radiator between the horns of the frame, there is an auxiliary pump driven off an extension of the magneto shaft, by which oil is directed to the sleeve operating mechanism and to the supercharger. Ignition is by high tension magneto, at the front of the engine, driven from a cross shaft, with a single plug in the center of the cylinder.

The Guyot Specials have a height of 31 in. to the top of the radiator, the line increasing from this point to the maximum of 39 inches on the top of the gasoline tank. The four wheel Perrot brakes are operated simultaneously.

In the two Eldridge Specials, one of which is a two-seater, built in France for the Indianapolis race, very close attention has been paid to stream lining and to obtaining a low center of gravity, the two seater having a total height of only 31 in. and a perfectly flat under surface. Front and rear axles and springs are mounted above the frame members; the engine is offset to the left in the frame, the differential is out of center, and the driver's seat is below the top of the propeller shaft housing.

Each engine is a four cylinder of 69 by 100 mm. (2.07 by 3.9 ins.) bore and stroke, bringing it just within the piston displacement limit of 91½ cu. in. The cylinders are a single iron casting with a detachable head mounted on an aluminum crankcase. A three bearing built-up crankshaft is used, the shaft being in five parts with Hoffmann rollers for the bearings. The connecting rods are I-section without split ends, also having roller bearings.

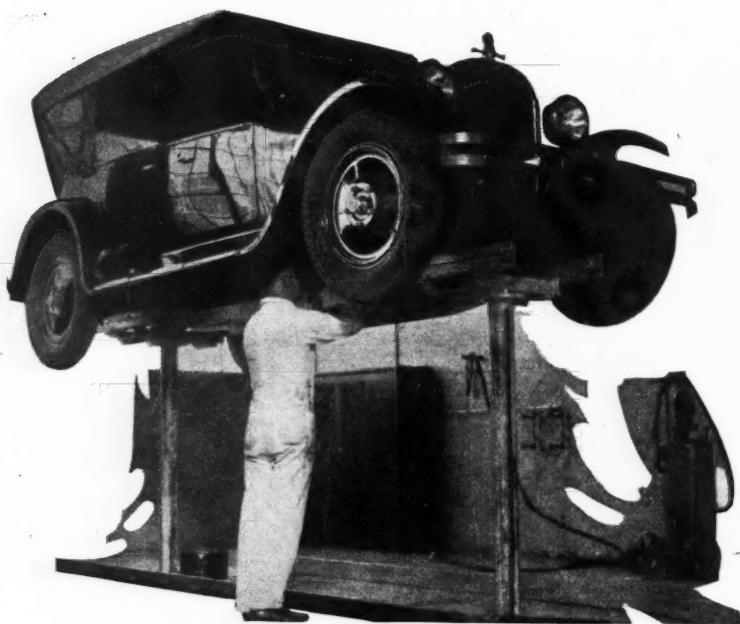
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steel sleeve having a combined reciprocating and helical motion, is made use of.

A one piece crankshaft with circular webs is used and a Hoffman roller bearing is placed between each cylinder. The connecting rods are tubular section, with split ends, also mounted with Hoffman roller bearings. A horizontal shaft on the right hand side of the crankcase, and driven off the crankshaft by spur gearing, provides independent drive for the eccentrics operating the sleeves.

The engines are supercharged by means of a Rootes blower drawing a mixture through a Cozette carburetor. The blower is driven vertically by bevel gearing off the front end of the crankshaft, at a speed of 6000 revolutions for 5000 revolutions of the engine. The mixture is delivered through a horizontal pipe and an elbow containing a pressure relief valve into the straight intake

April 8, 1926



An elevating device which gives the operator excellent opportunity to get at all the points of lubrication on a motor car. With this device, also, the wheels of the car are free to be turned and loose bearings, worn king pins, tie rod yoke bolts, etc., quickly can be located. This particular elevating device operates hydraulically and incidentally is an excellent means to attract attention, especially if placed where easily seen by the public.

(This is the second of two articles on lubrication service. The first was published in last week's issue of MOTOR AGE.)

MUCH has already been written about the improvements in engine and chassis lubrication and it probably will suffice here to briefly sum up the salient features of recent developments tending to help the maintenance man in his work of lubricating the chassis.

Some of these things are: Easier means for draining the old oil from crankcases; better location of oilers, grease cups and fittings on spring shackles, clutch releases, water pumps, fan, clutch and brake levers, etc. Modern practice also is to build such units as the transmission case, rear axle housing, etc., oil tight so that the lighter lubricants can be used the year round in place of grease, which under even moderately low temperature conditions often becomes so stiff as to merely "channel" when the gears revolve. To facilitate the use of oil in such units, drain plugs and level plugs now are much more accessibly located.

Special fittings are available now to lubricate such parts as spring shackles, steering parts, etc., under pressure. In the shop catering especially to lubrication this is quickly done by means of a large portable greasing unit to which is attached a hose and fitting to couple up to the fittings on the car.

Flat rates are a big factor in making possible the merchandising of lubrication service. It is but very little work to compile a list of lubricating operations to be performed on various makes of cars and to establish a definite price for the work. The sample card reproduced herewith gives a good idea of the make-up that can be used in letting car owners know about this class of service. In this particular instance the special flat rate price of \$6.60 covering twelve lubrication operations and six other operations not strictly in the category of lubrication pertains to Oakland and Pontiac cars.

Modern

*Best Selling Argument is
Fact that the Dealer's Shop
May Do Complete Job in
Fraction of Time it Would
Take the Car Owner, and Do
It Better*

By B. M. IKERT

Although it is probably true that the majority of car owners are not interested in methods that reduce crankcase oil dilution so long as oil is available at 25 cents a quart and furthermore does not concern itself much with the problems of chassis lubrication in general, it is quite generally conceded that lubrication of the motor car is the most essential factor in getting low cost of car operation. For that reason there is an excellent opportunity for dealers and service stations in general to campaign chassis lubrication service to the limit.

The merchandising of lubrication service is not especially difficult once the dealer's place of business has been arranged for it. MOTOR AGE has in the past given many suggestions in its building planning departments as to how grease racks can be placed to best advantage in the dealer's establishment. The exact layout for a lubrication service station depends naturally upon local conditions.

We are showing herewith a suggested layout for a lubricating rack to be used where plenty of space is available and the volume of work is fairly constant. The rack itself is made of concrete, but it is possible to use channel iron or even wood timbers. Naturally concrete makes the smoother job and probably the most presentable.

To Facilitate Service

The thought behind the layout given is that the cars can be handled on a progressive basis, that is at point 1 certain operations are performed by one or two men, after which the car passes to point 2 for additional work and finally to point 3 where the finishing touches are put on. The rack is built higher at point 1 to afford a pit under the car for draining the crankcase, transmission, axle, etc. It permits a mechanic to stand up and conveniently work on the under structure of the car. Alongside are oil and grease containers. The funnel into which the crankcase oil is drained can be swung into various positions and the outlet pipe might well drain into the basement where the oil can be filtered and used in an oil burner for heating the building. Or the old oil can be run into barrels for hauling away.

At point 1 it would be well to take care of operations involving the draining and re-filling of the crankcase, transmission, brake rods and clevises, universal joints, if of the metallic type, rear axle housing and the springs of the car. To facilitate lubricating the latter, it might

Equipment Gives Speedy Lubrication

be well to provide a lifting mechanism such as a chain hoist by means of which the frame of the car can be raised, thus removing the weight from the springs and causing the leaves of the latter to open.

At point 2 lubricating operations on the spring bolts, steering knuckles, cross tube, drag link, steering gear case, brake control on front wheels, front wheel bearings and rear wheel bearings can be performed. Nearby should be a small bench equipped with a vise and a few hand tools for removing broken oil or grease cups, special shackle bolt fittings, and the like. The bench might also be provided with a compartment for carrying spare oil and grease cups, fittings for pressure lubricating systems, and similar items which very often have to be replaced on a car.

The final work of lubrication is done at point 3 where operations are performed on the water pump, fan bearing, horn, hand brake lever, clutch and brake pedals, generator bearing, distributor bearing, clutch release bearing and such parts as the hood hinges and latches, door hinges, etc. At this particular point it would also be well to provide an air and water tower for replenishing the water in the cooling system, if necessary, and to provide air for the tires of the customer's car. This might easily be done for "good measure."

There are on the market various pieces of apparatus for elevating cars and some of these usually can be installed to advantage in the dealer's place of business.

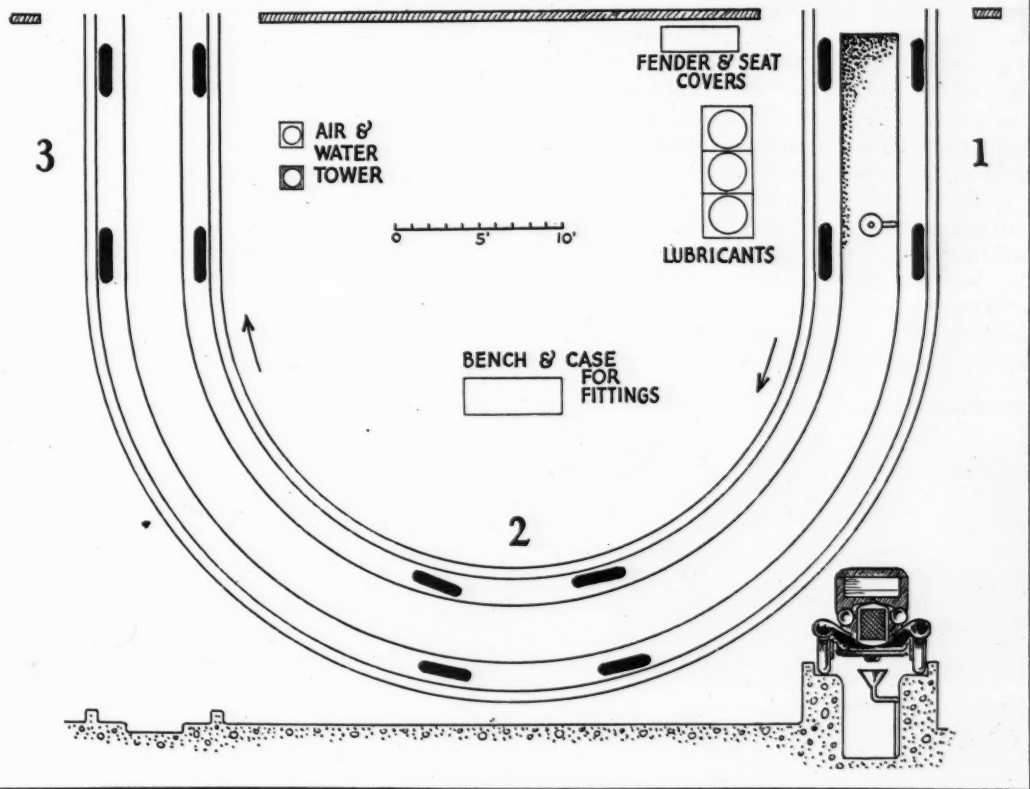
Some of the more enterprising institutions which have made a specialty of selling lubrication service have built their own elevating devices. One of these is shown herewith. This particular elevating device has a cradle with compensating rollers at each end enabling either end to be raised independently of the other. This it does without binding either of the elevating pistons.

The device, used by The J. E. French Co., Dodge Brothers dealer in San Francisco, permits one end of the car to be raised or the entire car as the case may be. The weight of the car is taken on the axles and not on the wheels, thus allowing the wheels to hang free, permitting inspection of the wheel bearings, steering knuckles and other parts. It also enables lubricant to be applied to the thrust bearings in the steering knuckles. On the floor are bolted metal flanges which serve to center the car on the cradle so that it is always in the same position. The car itself is held in the cradle by means of notches in the latter into which the axles fit.

There are two surge chambers under the floor of the same capacity as the two cylinders that raise the car. When a car has been properly centered over the cradle, the operator opens two valves at the wall which permit compressed air at 115 lbs pressure to enter the top of the two surge chambers which forces oil from these chambers into the cylinders that elevate the cradle bearing the car. A car can be elevated into working posi-

(Continued on page 30)

Where room is available and the volume of business fairly constant a lubricating rack as shown at the right might work out to advantage. In this case the car is driven on the rack, the highest point of which is at point 1. The wheel tracks are 2½ ft. above the level of the floor at this point, while at point 3 they are the same height as the floor. It will be noted that the floor between the two racks has a gradual slope, so that at point 1 it is below the level of the normal floor level. This is done to permit a mechanic standing in an upright position under the car at point 1. This layout permits of chassis lubrication on a "progressive" basis different operations being performed at points 1, 2 and 3 as explained in the text.



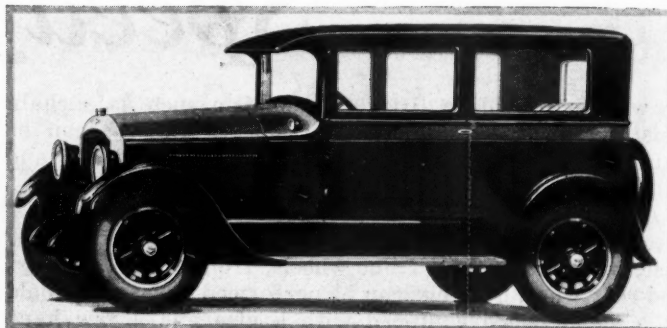
New Paige Brougham at \$1295 Has 115 Inch Wheelbase

A SPECIAL Paige chassis of 115 in. wheelbase with a new two-door brougham body listing at \$1,295 has been introduced by the Paige-Detroit Motor Car Co. to provide their dealers with a car midway in size and price between the New-Day Jewett and the standard Paige introduced recently. This model represents the lowest priced Paige car ever offered.

While the chassis is ten inches shorter than the present Paige and modifications have been made in the frame, tires, springs and axles, the new model follows the practice of the 125 in. car and employs the same engine, clutch and transmission and also the same four wheel hydraulic braking system.

The appearance of the brougham body, the radiator and the rest of the car follows the style adopted on the larger edition and the range of equipment is the same. Two tones of lacquer, Arizona gray above the belt line and Pueblo gray below with ivory stripes are supplied.

With the reduction in the size and weight of the car there have been necessarily some mechanical changes. Tires on this model are 31 by 5.25 and the brake drum diameters are 12 in. with the width of the lining $1\frac{3}{4}$ in. Lengths of the springs have been reduced two and three inches, respectively, for the front and rear, the dimensions on this model being front 36 by 2 in. and rear 58 by 2 in. The weights of both axles have been materially reduced and except for a slight change in the bearing layout in



The new Paige Brougham on the 115 in. wheel-base chassis, listing at \$1,295, the lowest priced Paige ever offered

the rear axle the design remains the same. The gear ratio, however, has been changed from 4.81 to 4.54 to 1. Finally, the frame depth and stock has been cut from 7 in. deep to 6 in. deep and the stock thickness is $1/32$ in. less.

Standard equipment includes shock absorbers on the front, thermostat control, air cleaner and heat indicator for the engine, dash gasoline gage, automatic windshield cleaner, mirror, stop light and a coincidental lock for the ignition and steering.

Beautiful Dealer Building Rises From Earthquake Ruins

FROM the ruins of the earthquake at Santa Barbara, Cal., last summer, many handsome new buildings already have sprung up. Among the noticeable ones are some of the homes of some of the motor car dealers. The Blake Motor Car Co., Oakland and Marmon dealer, was among the first to complete its new building, a beautiful structure of Spanish architecture, shown in the accompanying photograph.

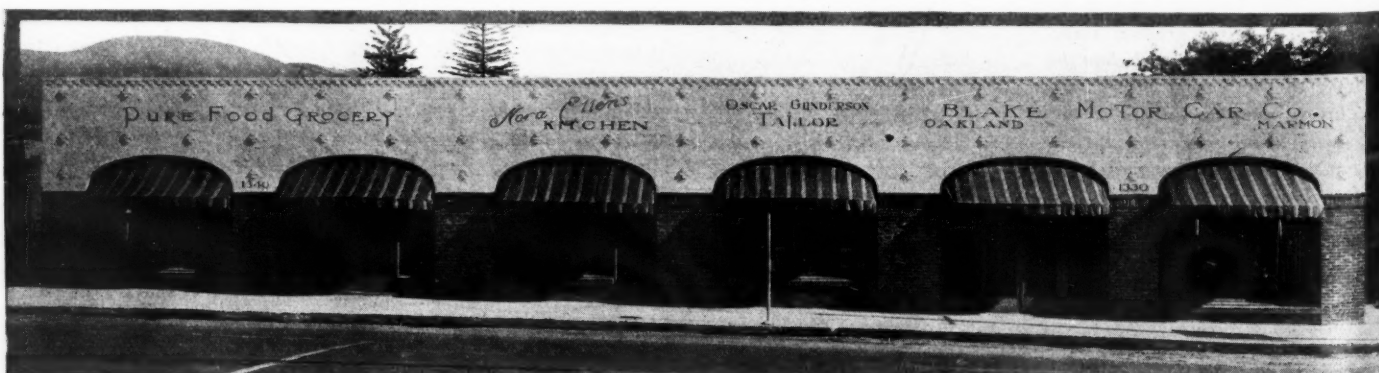
Concerning the hardships of the earthquake and the courage the business men of Santa Barbara have shown in building anew, George W. Blake of the Blake Motor Car Co., has written to MOTOR AGE as follows:

"The earthquake of June 29 practically demolished our building, but we managed to camp in the ruins by bracing pp the walls and roof.

"Our building was practically the first building to be completed after the earthquake and is in conformity with the effort the whole community is making to follow the Spanish and Mediterranean architecture. Surely this lovely city will be far more beautiful and unique after the reconstruction programs are completed. We will be more proud of Santa Barbara than ever.

"It is most gratifying and encouraging to see everyone trying to do his or her bit to make Santa Barbara a Bigger and Better City. But most of all it is marvelous how well business has held up since the quake—actually the automobile business has increased considerably.

"The worst thing that happened outside of the small loss of life was our failure to accept the many offers for financial assistance when the nation was in the mood to give it, for the tax burden to rebuild our schools, public buildings and churches—on top of individual losses—is apt to make it mighty hard sledding for some little time. We are big enough for our job, however."



Rest Room *an* Aid to Business

MANY progressive dealers are providing rest rooms for patrons in the buildings in which they do business. Department stores long ago learned the value of rest rooms and while it might be said they are more necessary to the foot-sore department store shopper than to the customer in the smaller business house it is apparent that there is a logical place in the smaller establishment's general scheme for this sort of institution.

To the automotive establishment the rest room provides a place for shop patrons to wait while work is being done on a car as well as providing a place of rest and comfort for persons interested in new cars, accessories or other products handled by the house. Let the tired prospect relax a while in the rest room and he might emerge in a better buying frame of mind.

When the W. A. Kelley Motor Sales Company, dealing in Fords, at Fountain and North Streets, Springfield, Ohio, planned its fine new home a commodious and cozy rest room was included in the program and it made a very favorable impression upon visitors attending the formal opening recently held. The opening, in fact, was a decided success presenting to the public the largest building in Springfield devoted to automobiles, accessories, repairs and service.

The Kelley agency has been in business for the last 12 years. It was started by the late W. A. Kelley, whose widow is financially connected with the enterprise today. She erected the new building which provides ample ac-

commodations for all departments of a modern automobile sales agency. The building has a frontage of 79 feet on Fountain avenue, 99 feet in North street and 173 feet in Fisher street. It is of fire-proof construction, concrete, steel and brick, and one story in height. White enamel paint is used on the inside, which combined with generous window space in the walls and a score of skylights makes the interior of the building as light as day.

The main office in the Fountain avenue side of the building includes a handsome show room, bookkeeping and business offices and a parts counter on the main floor, and a mezzanine floor containing the rest and a sales conference room.

One of the most complete lines of Ford parts and accessories in the state is carried.

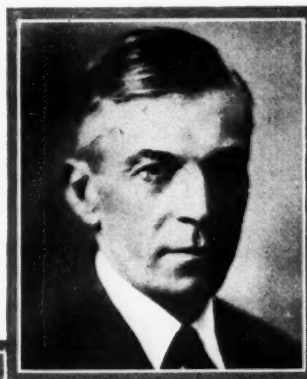
Four men are in charge of the parts department: Walter K. Roush, Lee F. Dill, Dean Jeironemus and H. W. Farmer.

A. G. Woodrow is manager of the service department with an office in the middle of the garage.

There are a score of mechanics, two floor men and two washers employed in the service department. This department occupies about two-thirds of the new building and is all on one floor.

The commercial car and used car departments have show rooms on the North street side and the new battery department is also on that side of the building. H. A. Pietzner is in charge of the latter department. Carl States is foreman of the shop in the service department.

Two interior views of fine new home of the W. A. Kelley Motor Sales Company, Ford dealers, Springfield, Ohio, one showing rest room and other a view of the main sales room. Also likenesses of three Kelley Company executives: Bert I. Tuttle, manager (lower left), James E. Sperry, assistant manager (upper right), A. G. Woodrow, service manager (top center)



NEW ITEMS CAR OWNERS NEED

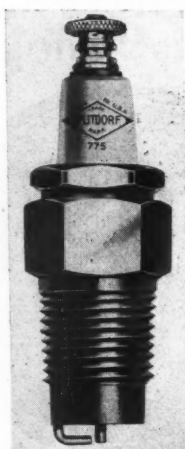
Wetterau "Gas-Gard"

A DEVICE to eliminate the inconvenience and embarrassment of running out of gas is the new Gas-Gard made by the Wetterau Manufacturing Company, Akron, Ohio. It is a small fitting which is inserted between the gas tank and sediment bulb and provides a reserve of a gallon or so of gas, which is made available for the motor by pulling out a rod the dash. The knob pulls out four inches and stands as a constant warning to the driver to fill the tank.

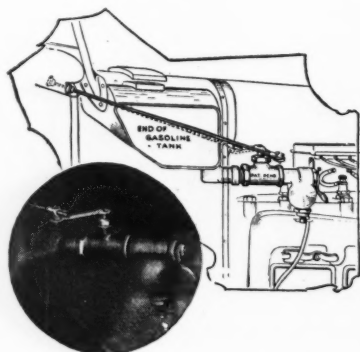
The Gas-Gard fits all of the new Fords, except the Fordor, and sells for \$1.75 retail.

Weed Fender Guard for Fords

A NEW fender guard for Ford cars has been developed by the American Chain Company, Bridgeport, Conn. This guard is an addition to the company's "Weed" line of automobile accessories. It may be installed on any Ford model without drilling or extra attachments. The brackets are not only of exceptionally durable design and fasten to the spare wheel or tire rack for additional support, but are supplied with slotted bolt holes to provide the correct height to the guard. This fender guard is shipped completely assembled, ready to install.



Splitdorf
Ford
type
porcelain
plug



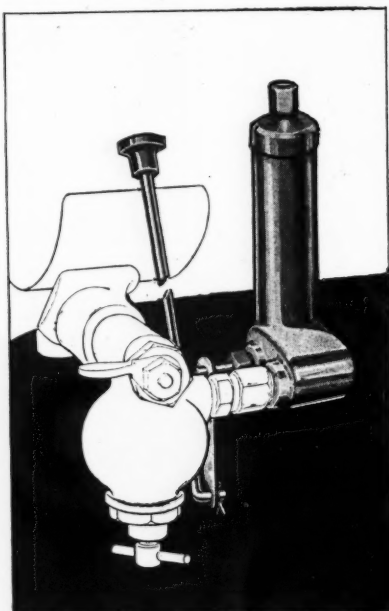
Wetterau "Gas-Gard"

Sphinx Gas Reserve

IN the Sphinx Gas Reserve, manufactured by the National Equipment Company, 821 Market Street, San Francisco, Cal., is found a device to save shoe leather for the Ford owner when his gas tank runs dry. The Sphinx attachment is five inches long and one inch in diameter and attaches between the sediment bulb on the gas tank and the carburetor, holding a gallon and a half of gasoline in reserve for emergency. When the Ford's behavior indicates that the gas in the tank is about exhausted operation of a control lever on the dash brings the reserve supply into play. The device is quickly installed and no drilling is necessary while it is said that the installation does not affect normal Ford operations in any manner whatever. The Sphinx is made not only to apply to the gas tank under the cowl but also to the tank under the seat. It retails for \$2.

Anderson Reserve Gas Tank

THE Anderson Steam Vulcanizer Company, 1123 N. Hamilton Ave., Indianapolis, Ind., is on the market with a gasoline reserve tank for Fords of 1923, 1924 and 1925 models which carry the gasoline tank under the seat. The Anderson installation provides an emergency supply of fuel sufficient to run a Ford five to seven miles. It consists of an iron frame which is bolted to the car frame, a one-third gallon self-filling reserve tank which connects to the gas feed line and a small dash dial with which the reserve tank is operated. The reserve container fills automatically when the main tank is filled. The device, including reserve tank, brackets and dash control complete retails at \$5.



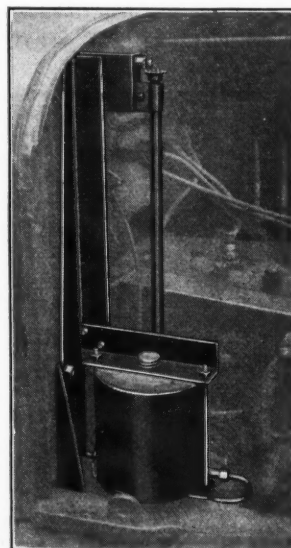
Sphinx Gas Reserve

Multiplex Piston

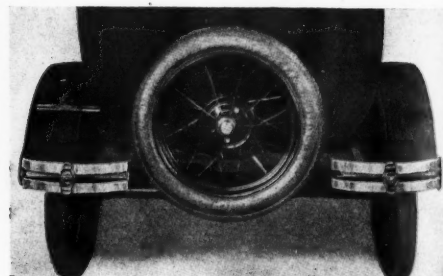
THE Multiplex piston made by the Multiplex Mfg. Co., Berwick, Pa., is made of a semi-steel alloy which is said to be stronger than cast iron and is from 5 to 16 oz. lighter than a conventional cast iron piston. The lower ring groove is drilled and the skirt is of the semi-skeleton design.

Splitdorf Porcelain Plugs

SPLITDORF Electrical Company, Newark, N. J., is now manufacturing and merchandising a "half-dollar" porcelain spark plug for which a number of virtues are claimed. The plug is of one and two piece construction and made in sizes and types for all gasoline engines. The center electrode is threaded and cemented solidly in the insulator. The upper gasket, which seats the steel bushing, is of the stuffing box principle of construction, asbestos yarn being used instead of hard metal gaskets to eliminate vibration and prevent porcelain breakage. Special alloy steel electrodes and a special copper-asbestos gasket seat for the porcelain against the steel shell are features. The shape of the insulator is of the new semi-petticoat design, withstanding high compression as well as engines throwing oil.



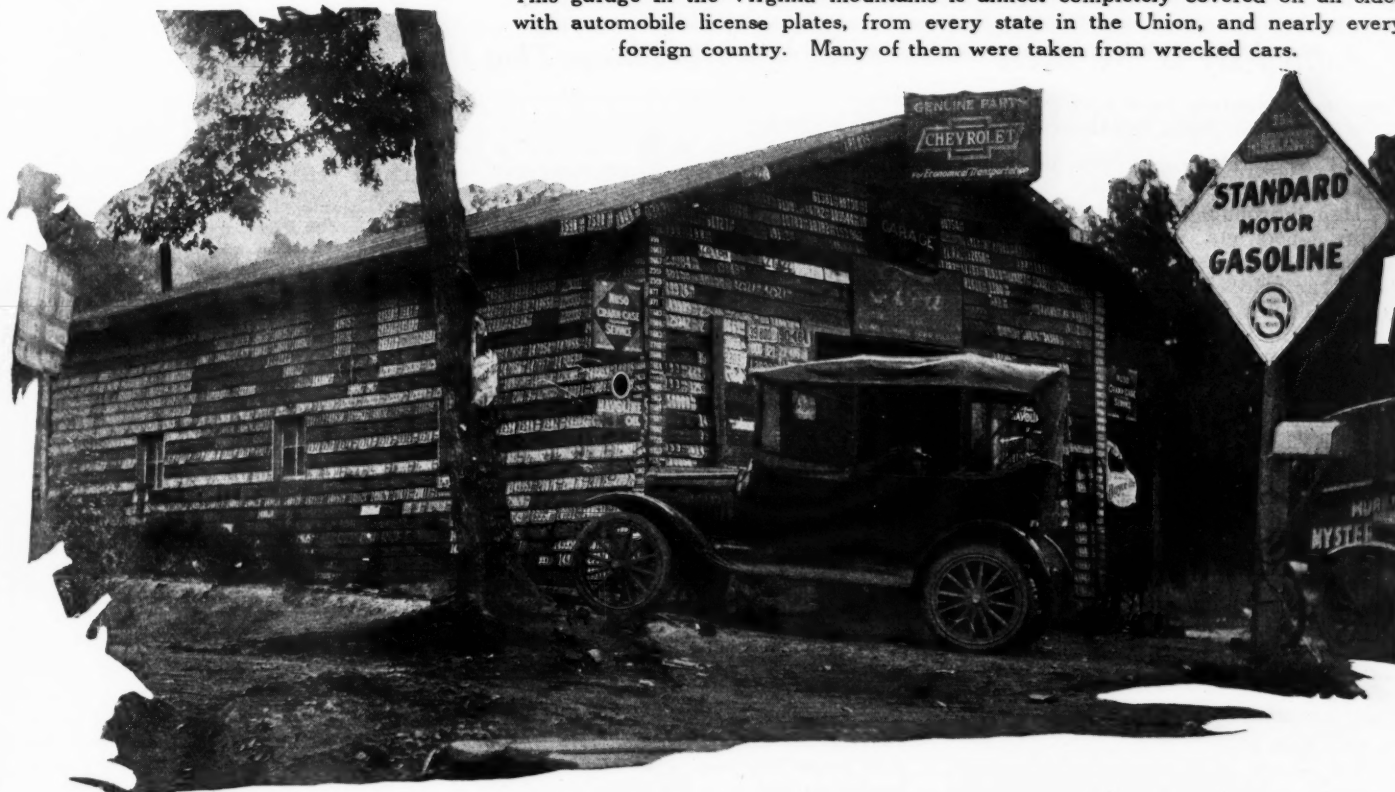
Anderson Reserve Gas Tank



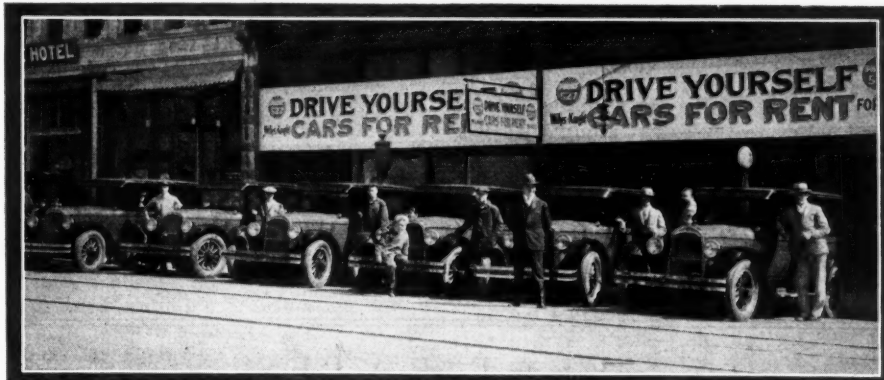
Weed Fender Guard

Trimmed with License Plates

This garage in the Virginia mountains is almost completely covered on all sides with automobile license plates, from every state in the Union, and nearly every foreign country. Many of them were taken from wrecked cars.



CLEAN SALES. At the right we have a line-up of Willys-Knight sedans delivered in one day by J. A. Lowrance & Son, Hot Springs, Ark., the delivery being to the operator of an automobile rental business. No used cars were traded in on this deal.



FOR CAMPERS. Left: By removing the seat of this 2-passenger Reo Coupe, it is quickly converted into a sleeping place. The display, staged by the factory branch at San Antonio, Texas, was added to by a complete camping outfit surrounding the car, including cooking utensils, a gun, and other articles such as one takes on hunting trips.

A Good Parts Department Will Gain Good Will for the Flat Rate System

Edited By B. M. Ikert

Things That Help Flat Rate

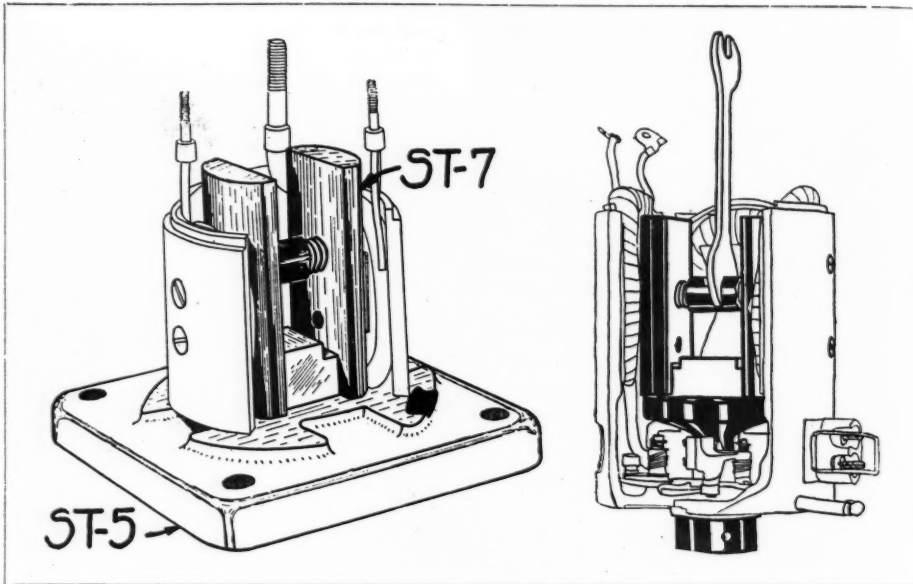
Perpetual Inventory Card System Necessary With Parts Department

JUST as a railroad system needs besides its rolling stock such things as signals, roundhouses, stations, shops, supply depots, etc., so does the flat rate system need more than merely a book listing the prices of repair operations or time schedules for such operations.

Mention often has been made in these columns of the importance of equipment, personnel and so on, and while these are highly necessary for the proper fulfillment of selling repair operations at a fixed price, there are other things just as important.

The supply of parts, for instance, has much to do with new car sales as well as the attainment of good will, to say nothing about its relation to flat rate. If your establishment has a good parts department it is pretty sure to incorporate stock bins that are adequate and suitable and the perpetual inventory card system will play its part.

For the guidance of those who are confronted with the problem of how much stock to carry, it might be said that the minimum stock should equal the actual sales during three months time. In the same way the maximum stock should equal the sales over a period of six months. Naturally much depends upon the proximity of the dealer place of business to the source of supplies. It is poor policy to try to get along with less than the minimum parts stock. This procedure often leads to bad misunderstanding between shop and customer and gives the flat rate a black eye. It means little to quote the customer a flat price for labor and parts, give him a time of



Good Tools Are Necessary for Good Work

These Delco piece spreaders were designed to make it possible to properly pull the pole pieces into place after making any necessary field coil repairs. If the coils have been disturbed, it is practically impossible to pull the pole pieces into place by means of the mounting screws. If this is attempted it usually results in stripped threads in the laminated poles, while on the solid ones the tips may be bent down enough to rub the armature. The set consists of a standard base, an adapter that takes the place of the base in a few cases and five spreaders which handle the full line of Delco equipment.

delivery of the job, only to find the parts not available.

A parts inventory system is absolutely essential, whether the shop operates on flat rate or not. Many leaks go by unnoticed, unless there is some definite check on the parts. Most factories help their dealers in establishing a perpetual

inventory system for their parts department.

In such systems it is general to make out a card for each and every kind of part carried. Also on this card should be the name of the part, the number of the part, cost, list and sales price, location in the stock room and the amount on hand.

The cards ought to be checked once every six months. Some kind of signal system is generally used to tell the parts room keeper of his stock. Thus, when the minimum of some part is reached, the operator slips a red sticker on the card, a danger signal that then it is time for reordering. When the parts have been ordered the red tag is replaced with one of another color.

Bent Frames and Twisted Axles

There are some operations coming up in the shop for which it is admittedly difficult to establish a flat rate. Such things as bent side frame, side rails, twisted front axles and similar parts which often have to be sent to a shop making a specialty of this class of work cannot be readily figured. Many shops under such conditions charge at the hourly rate, while on the other hand some shops make a "contract" with some outside concerns for the work and then are able to place a more definite charge for the work to the customer.

FLAT RATES for Hupmobile Bearing, Rod and Piston Pin Operations

Motor Age's Flat Rate Forum No. 59

Manufacturers' Official Designation			Time	
			Hrs.	Min.
4-46	Replace one connecting rod bearing.....	Cars under R-100,000	2	15
4-46A	Replace one connecting rod bearing.....	Cars after R-100,000	1	
4-47	Adjust seven bearings.....	Cars under R-100,000	3	45
4-47A	Adjust seven bearings.....	Cars after R-100,000	4	
4-48	Replace one piston pin.....	Cars under R-100,000		45
4-48A	Replace one piston pin.....	Cars after R-100,000		45
4-49	Replace all rings on one piston.....	Cars under R-100,000		30
4-49A	Replace all rings on one piston.....	Cars after R-100,000		30
4-50	Adjust seven bearings and replace pins and rings as required.....	Cars under R-100,000	6	45
4-50A	Adjust seven bearings and replace pins and rings as required.....	Cars after R-100,000	7	
4-51	Replace one piston without reboring cylinder barrel.....	Cars under R-100,000	1	
4-51A	Replace one piston without reboring cylinder barrel.....	Cars after R-100,000	1	
4-52	Replace one piston and rebore cylinder barrel, using a screw feed type of boring tool.....	Cars under R-100,000	1	
4-53	Line up one connecting rod.....			15

The READERS' CLEARING HOUSE

Questions And
Answers



On Dealers
Problems

This Job Requires a Good Man and Special Tools

Q.—Show illustration of Packard clutch used on two ton truck and explain method of disassembling.—A. Leonard, 621 E 6th St., Duluth, Minn.

This is a job that requires certain tools and special knowledge. We will, however, outline the general procedure. To get the clutch out of the truck, take off the gearshift levers together with upper part of the housing. Disconnect the rods which connect with the transmission and tie them up to the steering column so they will not fall down and get in the way. Disconnect universal joint. Disconnect clutch rod. Take out bolts around bell housing and draw out clutch and housing together. This assembly can then be put on the bench. Remove oiler which lubricates clutch shifter bearing.

If this is not done it will be broken when the parts of the clutch are withdrawn. Use a release screw which should be available at any Packard service station and putting it through the threaded hole in the clutch end plate, turn it in until it thoroughly compresses the clutch spring. Remove eight studs in the end plate of the clutch and take off end plate and all clutch plates. Remove two cotter pins in trunnions of clutch shifter sleeve. Referring now to the illustration, take off Nut No. 2 and by using a puller, remove No. 1.

The shaft and main portion of the clutch can now be pulled out of the housing. Leave 35 in the housing. Take out the cap screws which hold 35 and remove it from the housing. Item No. 34 can now be removed while No. 3 and No. 32 may be removed from the slot in No. 35. Next remove 29 and lock screw in 28. Remove 28, 26, 25 and the cover from 25 which comes off after taking out four screws. Remove 24, 7 and 8 and inspect. If 23 is worn it should be replaced. Otherwise it may be left on. The shaft of the clutch will have to be pressed out of No. 20. This releases the spring which will fly out with the shaft.

ENGINE R.P.M. OF A FORD

Q.—We would like to know just how many r.p.m. a Ford engine, in good condition, will turn up to.—Van Byers, Douds, Iowa.

We have no definite information on the maximum R.P.M. but can get some idea by figuring back to the car speed. Some of the coupes will do 45 or 50 miles per hour. If we take 50 miles per hour as a basis and figure the engine R.P.M. we get 2,030 R.P.M. for the en-

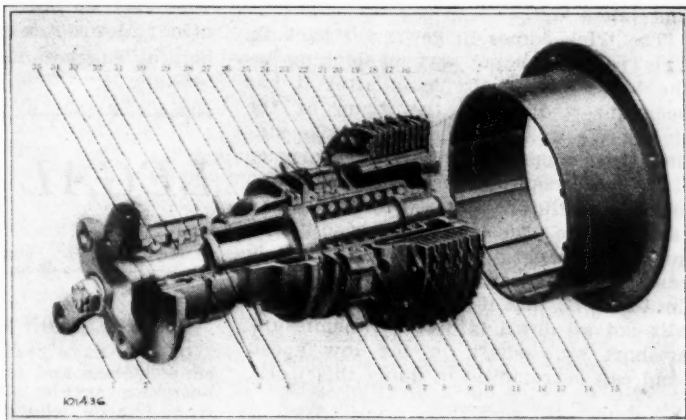
gine, neglecting wheel slippage. Without a load and racing the engine the speed will possibly go up to 2400 R.P.M.

AN ENGINE SPEED COMPARISON

Q.—At a speed of 20 miles per hour what are the engine revolutions in the Overland model 91, Chevrolet model K and the Star 4 cyl.—Robinson Overland Motor Sales Co., Robinson, Ill.

Figuring that each model uses 29 by 4.4 balloon tires and that the Overland gear ratio is 4.5, the Chevrolet 3.82 and the Star 4.87, we find that the Overland engine would be turning 1,025 R.P.M., and the Chevrolet 885 R.P.M. and the Star engine would be turning 1110 R.P.M. Figures exclude wheel slippage.

Partially cutaway
view of clutch
used on Packard
2-ton truck



LET OUT THE AIR AND AVOID CLUTCH TROUBLE

I am a reader of MOTOR AGE and get some very valuable information out of it. I am service manager of the Lawndes Motor Car Company, Buick dealer. In the February 18th issue Mr. Bert Monroe was having trouble with a 1923 Buick leaking grease from the transmission to the clutch. This trouble may be eliminated by drilling a 1/4 inch hole in the transmission cover which will release pressure from the case. The correct grade of transmission oil should also be used, this being not heavier than 600-W and it should not be filled higher than the level of filler hole at side of case.—C. W. Cable, Columbus, Miss.

LIFT OF FORD CAMSHAFT

Q.—Using a reground Ford camshaft, what is the maximum lift possible without excessive noise?

It depends somewhat on what you consider excessive noise. We would recommend getting in touch with concerns which specialize on camshafts and on racing parts for Ford cars and taking their recommendation.

Not Guilty, Says Engine—Vibration Is Elsewhere

Q.—I sold a customer a Rickenbacker series D6 Brougham last spring and it seems to have a period of vibration at from 38 to 45 miles per hour. This vibration is not in the engine as it shows up at the same speed when coasting down hill and with gear lever in neutral and engine dead. It must be in the drive shaft or rear axle, as we cannot find anything out of line. I have thought of putting a counter balance on the drive shaft and rotating it by degrees to see if the shaft is heavy on one side. It also occurs to me that the Hotchkiss drive and the balloon tires may tend to produce a condition of this sort.—J. C. Dill, LaMoure, N. D.

It is quite likely that you are on the

right track. We have however, one or two other suggestions. One is to take up any looseness that may exist in the hub bearing adjusting nut, so that you do not have unnecessary play in the rear axle drive shaft. Another suggestion is to see that all spring shackles are tight and that all undue looseness is removed. The other suggestion is to balance up the balloon tires on the rear wheels to see that one side is not appreciably heavier than the other. The shimmying of front wheels is often caused by unbalanced wheels equipped with balloon tires, and this leads us to believe that it may be the cause of your trouble on the rear wheels. To balance the rims and tires would suggest your jacking up one front wheel and getting it in balance by applying weight at the necessary point. One method is to use wire solder and wrap it around the spokes until the wheel shows no tendency to settle in any particular position. Then you can apply a tire and rim to this wheel and apply other weights until you find the amount that needs to be attached to the rim at any particular point. This weight should then be applied at the proper point on the rear wheels.

Answers to Readers' Questions

Quick Change Bands Require Some Skill

Q.—Is it possible to install bands in the 1926 Ford car without removing the transmission cover? If so describe the necessary operations.—John N. Ashman & Sons, Stelvideo, Ohio.

The slanting door on the transmission cover is removed and one rivet in the left ear of each transmission band is picked out with a screwdriver. The left ear can then be driven still further to the left which will enable it to come off as it fits over a sort of rivet head and due to the shape of the slot in the left ear of the transmission band the rivet head will go through when the ear is driven to the left. The band at the front is taken out first and then the next one is moved forward and taken out and then the last one moved forward and taken out.

The trick comes in getting it back in. This requires some way of picking up the loose end of the band after it has been inserted under the drum at the right. We understand Ford service stations have a special tool for this purpose. It is of course, also necessary to loosen up the bands before this work can be done and take off the adjusting nut at the right. As a precaution it is wise to take a rag and wedge it around the bands so that if washers fall off they will not go down into the transmission. A short stub shaft on the low speed band can be removed in doing this work.

WHICH SHOWS THAT EDUCATION DOES PAY

A few weeks ago in MOTOR AGE I noticed a Clearing House item where someone was troubled with a squeaking generator brush, for which there seemed to be no certain cure. About a year or two ago I had a similar case of trouble with a field brush that vibrated so badly that it lowered the charging rate. I remember that when I went to school we made fierce squeaks by drawing chalk lines on the black board, holding the working end of the chalk forward, just a little. This led me to file off a little of the forward end of the brush to give it more of a dragging action and less pushing effect. This corrected the trouble and the squeak has not returned.—R. M. Jewett, 2013 McGee Ave., Berkeley, Calif.

HERE'S HOW TO STOP THE SQUEAK

Would like to suggest raising valve rocker arm assembly $\frac{1}{8}$ in. to stop the squeak in Nash 1923 valve as mentioned on page 25 of March 4, 1926, MOTOR AGE. This can be done by installing $\frac{1}{8}$ in. spacers under present valve rocker arm assembly spacers.—John Foreman, 9 Brookshire Place, West Asheville, N. C.

WHAT TO DO WITH OLD OIL

Q.—We have an accumulation of about 20 barrels containing oil taken from the crankcases of automobiles. We wish to dispose of this oil and we are under the impression it can be used for oil burners. Would also like to know if there are concerns that refine the oil for using it again in crankcases of automobiles. Would like your suggestions as to a good way of disposing of this oil, preferably at a profit.—Shelko, 210 E. Washington Ave., Madison, Wis.

Refining equipment is somewhat expensive so that we usually find that only very large concerns using several hundred gallons of oil a day could reclaim their oil to advantage. MOTOR AGE has no definite information on the use of this oil for burners, but understands it is necessary to filter it carefully to eliminate grit and dirt which would otherwise clog up the burner. Possibly some of our MOTOR AGE readers can contribute helpful suggestions along these lines.

Burn 'Em Up with Too Little Clearance

Q.—On a 1925 Chevrolet which has run 5,500 miles, it has been necessary to have service work done on the valves five times and the No. 4 exhaust valve fails to seat properly after running about 800 miles.—Howe Garage, Howe, Idaho.

Perhaps the driver of the car is a little too fussy and wants the valve tappets set up too close so as to eliminate noise. The clearance of the exhaust valve when hot should not be less than .006 inches and the intake valve should not be less than .004 inches. If there is any tendency for the valves to hold open they will rapidly burn and give trouble.

Offset Piston Pin

Q.—On a Buick 1918, 6 cylinder car with piston pins off center in the piston, which side of the piston is supposed to be at the left as seen when sitting in the driver's seat.

The thick side should be to the left.

LEGAL QUESTIONS ANSWERED

By Wellington Gustin

A QUESTION OF NEGLIGENCE

Q.—We have been having several large snow storms and at times the roads have been impassable. On February 4, a man from Sharon went to Amenia, a distance of five miles. He was so long in returning, his wife called for me to go and find him, as I do livery work. At the same time several men with horses started from Amenia to locate him. He was stranded in a five foot snow bank. He decided to walk home and leave his car. I did not reach his car because I had become stranded in a bank too. In working to get out I broke the rear end of my car, a Durant sedan, the damage amounting to \$25. My question is, would I be justified in making him pay for damages to my car or not?—D. C. Pierce, Sharon, Conn.

You would have no right of action in damages for injuries resulting from the negligence of the party lost or his wife, acting as his agent, but it might be successfully urged from all the known facts, which you do not give, that your damages resulted from your own negligence in driving into the snow bank or in trying to get out. I am not saying you were negligent, but the facts might prove that you were. Would one of ordinary care and prudence have done as you did? If so, then you were not negligent. Then the one way open to you would be to found your claim on contract—express or implied. Did the one who sent you out know of the dangers probably to be encountered, know that

you were taking these risks, and agree to reimburse you for any such probable losses? She may not have said so in so many words, yet her words and acts may have been such as to show she was willing to bear all the expense, including mishaps of your journey.

SUIT BEST REMEDY

Q.—A party brought a car to me with instructions to repair it, which I did. When the car was finished he paid one fourth of the account and I let the car go out. Shortly afterwards the car was repossessed by the dealer who sold it and who no doubt holds a chattel mortgage against it. What can I do to collect the balance due me?—An Ohio Repair Man.

I do not find that the statutes of Ohio give you a lien with any special rights for repairs. Therefore you have to rely on the common law lien. This lien is good only so long as you retain possession of the repaired article. Since you let the car go out of your shop willingly, you lost the repair lien. Even had you retained possession, the lien of a chattel mortgage given before the repair lien is made, has priority.

It appears that your only recourse, outside of effective persuasion in collecting your charges, is to bring suit on account due you, then levy on the judgment obtained against any and all property of defendant, which is not exempt, until your judgment is satisfied.

Planning Your New Building

Large Sales and Service Building on One Floor

Q.—I wish to erect a new building and am enclosing a rough sketch I have made of the lots with an outline indicating for what purpose the building is to be used. It is planned to have the Sinclair Oil Corporation (now using part of this property) have the corner for a filling station with sales room for their products the roof of building to extend over to corner of lot with filling station under roof, or otherwise, perhaps. There is to be a front composed of plate glass windows to show display of new cars on long side of building, which is to be one story without posts, if possible, at least in main interior. There will also be a tire repair and sales room, with battery service, garage repair shop, and car storage, etc.—Missouri Reader.

We are assuming that the east and west lines of your lot are parallel and taking the angles shown in your sketch and presume that these are about right since the angles at the other end come exactly 90 degrees with the given measurements of the sides. The layout of a building as large as this one depends to a considerable extent upon the proportions between the different departments. Some concerns cater to storage while others specialize in service and only store cars during service. Still others devote most of their storage space to their own new cars and devote their efforts to selling new cars.

In want of hint from you regarding the proportions you desire, we were obliged to use our own discretion and have tried to make an average layout. The showroom for cars is ample to show a full line

of most any make or perhaps two makes of cars. The general office is comparatively large and there are three private offices and place for salesmen's desks undoubtedly sufficient for a business of this size.

The service department however, is a little larger than usual and it may be advisable to devote part of this space to storage. This could be done by storing cars along the alley side of this section continuing the aisle, now the storage section, clear through to the opposite wall. We have given quite a space to parts stock and installed this upon the street front so that the stock keeper may dispense parts to the retail trade as well as to the shop.

Greet the Customer at the Door

We have placed the battery and tire shop at the entrance to the storage garage as in a big institution of this sort they really do not fit in with the regular service department. It might even be well to make this entrance the regular service entrance, stationing the office of the service salesmen here. Then as cars come in they can be inspected and if only minor adjustments are needed it may be done immediately at this point. Otherwise the car will be stored in the garage until there is space in the service department to take care of it.

In construction the building is divided into three parts. The service department is 60 ft. wide and the total depth of the lot, this being the minimum width for two rows of cars, benches and aisle space. The remainder of the building is divided longitudinally into a 55 ft. and

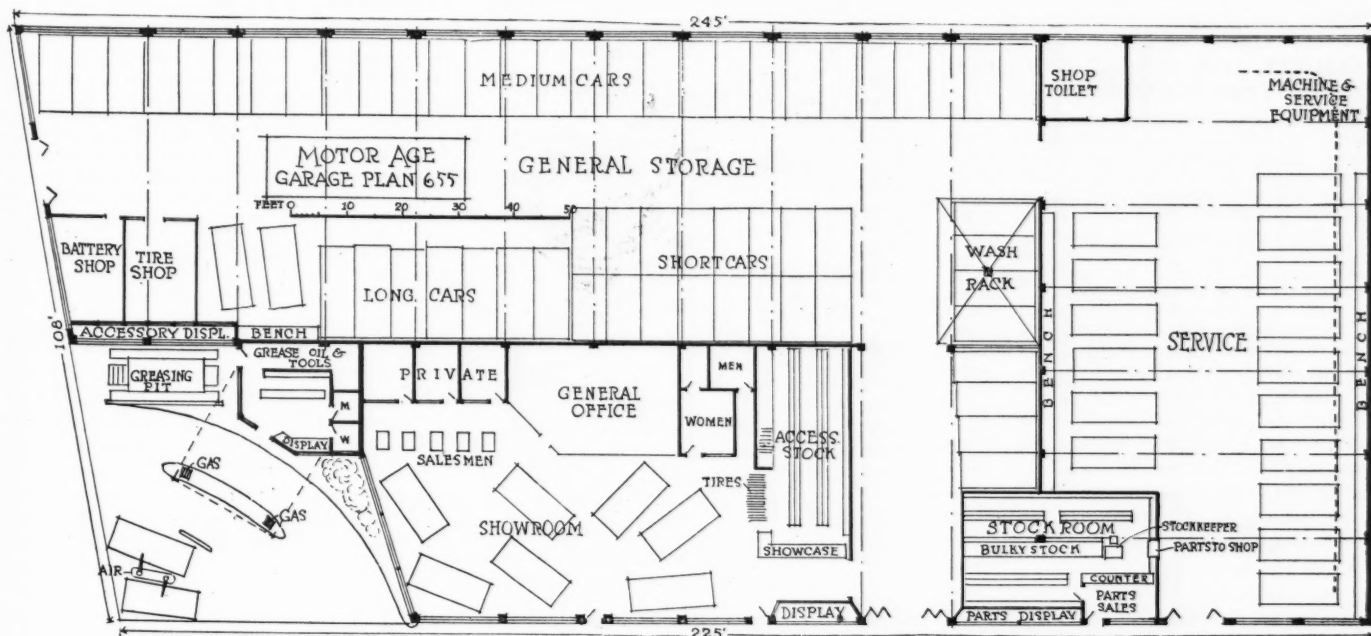
By Tom Wilder

a 50 ft. section. The 55 ft. width or the garage section makes it possible to store two rows of small cars and also gives a little better working space for quick service and adjustment at one side. The windows on the alley side along the side of the garage, should be high windows of which the sills are about eight feet from the floor. This allows the light to come in over the top of the cars and does not waste any glass. The windows in the service department may be full height. There should be ample skylight arrangement as the bulk of the floor space is too far from the windows to get very much benefit from them.

METERS, METERS, BUY AND USE THEM

Q.—On a Ford car with wiring in perfect condition and battery not overcharged the headlights burn out with 9 volt bulbs. —Howe Garage, Howe, Idaho.

You cannot tell anything about the wiring by merely looking at it. It is necessary to use a voltmeter. For example, there may be a poor connection on the inside of the ammeter which would make the lights burn out. This question was thoroughly explained in the Bill Fixit story on page 14 of the March 11, 1926, issue of MOTOR AGE and we would suggest your reading this story carefully.



The filling station is separate from the rest of the building and is to be leased to an oil company

Answers to Readers' Questions

Pops Back When Slowing Down Speed

Q.—We have a 1920 six cylinder Buick, model K-45. This car works fine as far as power and speed are concerned, but when slowing down at a rough spot or when rounding a corner, it will pop back in the carburetor. We have examined intake springs and valves also air valve spring and carburetor and have done everything Buick dealers have told us to do.—Henry Zeigler, Twin Brooks, S. Dak.

Check the spark plugs and see that you are using a type which has a short cone shaped electrode. It is possible if you have a petticoat type the end of the porcelain gets red hot and causes pre-ignition. Short heavy electrodes are better than long thin ones. Another possibility is that you need more heat to the carburetor. If the hot spot has not been cleaned out for some time, it would be well to take it off and burn out the carbon with an acetylene flame. The tubes of the hot spot should be thoroughly cleaned out.

Take Out Manifold Valve

The manifold valve should also be taken out and cleaned thoroughly to see that the valve closes tightly. This valve can also be burned out. You might also try adjusting the rod which connects from throttle lever to the hot spot lever so that it is connected in the hole nearest to the radiator. The object is to get the hot spot lever movement delayed until a car speed of about 25 miles an hour is obtained. This also means that in slowing down there will be more heat diverted to the carburetor again, a desirable feature when operating at low speeds.

DELICATE ADJUSTMENT REQUIRED ON THIS CLUTCH BRAKE

Q.—We are having trouble shifting gears on a Big Six Studebaker, 1921 model. This car has a cone clutch which releases free enough and the clutch brake works, but it is nearly impossible to shift gears if not done when car is just moving. When in second and accelerating to 20 miles an hour you cannot shift into high and it is nearly impossible to pull the lever out of second. Also on taking foot off of accelerator after accelerating for shifting the car slows up as if the brake had been applied, even when clutch has been released.—Carl Schenk, Parkside Garage, 44 LeRoy Ave., Buffalo, N. Y.

MOTOR AGE readers who have any suggestions to offer are invited to write them to the Clearing House. One possibility we wish to mention is that the clutch brake is not properly adjusted. This has to be adjusted very carefully. If tightened too much it tends to cause the condition you describe and if not tight enough it allows the clutch to spin and makes it difficult to get into low speed.

OIL IN THE GAS TO PROTECT COLD ENGINE

Q.—In starting up a cold engine in winter there is danger of damaging the bearings and cylinder walls before the oil has warmed up enough to flow to the various parts of the engine requiring lubrication. This is especially true after new oil has been added. To avoid damage under these circumstances it is suggested that a quart of lubricating oil be put into the gasoline tank at the same time that the engine oil is changed. Many two cycle engines depend entirely on oil supplied in this manner. This will carry some lubricant to the cylinder walls and will protect them during the warming up period.—F. J. Leyerle, Franklin Automobile Co., Syracuse, N. Y.

This seems to be a very good idea. The only possible disadvantage we can see is the slightly greater tendency for carbon to accumulate in the combustion chamber.

Watch for MOTOR AGE'S Revised Flat Rate Manual in the May 6th Issue

SHOP KINKS IDEAS

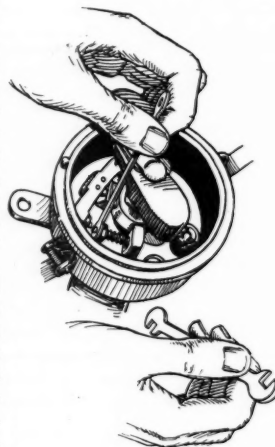
That have been Found Useful

Interrupter Point Installation Tool

A handy tool to hold Remy and Delco interrupter points is made from iron $\frac{1}{8}$ in. thick. In one end a hole is drilled to fit Remy points, while the other end has a hole drilled for Delco.

With the tool in one hand the point is held in place while the other hand manipulates the wrench.—G. H. Hains, 386 W. Main St., No. Adams, Mass.

Readers of MOTOR AGE are invited to submit ideas that they have found useful in doing some particular service job in the shop in a better or quicker way. For each one published \$2.00 will be paid. Whenever possible the idea should be accompanied by a sketch or diagram from which a drawing can be made.



A Loose Bolt That Causes Much Trouble

Q.—We have a 1925 Chandler that is giving axle trouble. The first time it gave trouble it had run 5000 miles and sheared all the teeth around the pinion. The locks on the ring gear adjustment were all tight, but there was about $\frac{1}{4}$ inch side play in the ring gear. New ring gear and pinion were installed and the adjustment was made right and since then have had to make adjustment several times, each time finding about $\frac{1}{8}$ inch play.—O. L. Dixon, 2875 W. Liberty Ave., Dormont, Pittsburgh, Pa.

How to Overcome It

The bevel pinion assembly is supported in a cage which can be moved back and forth in order to properly mesh the pinion and ring gear. When the adjustment has been properly made it is supposed to be locked by means of a bolt which clamps the housing. The housing is split and the bolt tightens up by compressing where the housing is split. If this bolt is not thoroughly tightened it makes it possible for the pinion assembly to work back and forth and loosen the threads and if this condition goes on too long the threads may be damaged so that all parts have to be replaced. In your particular case this apparently happened until the threads slipped by one another and allowed the pinion to back up. We do not believe the trouble was in the differential adjustment. One remedy is to cut the slot a little farther so that it is easier to thoroughly tighten the bolt and make it clamp on the threads.

QUEERLY BEHAVING AMMETER IS THE RESULT OF A SHORT CIRCUIT

Q.—On a 1916 Dodge Brothers car an ammeter is connected in the starting circuit. One day in operating the starter the needle swung toward charge instead of discharge. When the engine started and the machine began to charge the battery the ammeter said discharge instead of charge. It operated this way after two or three starts and then suddenly reversed and behaved as it should. What made the ammeter do this?—Harold Woodard, R. F. D. 6, Box 4, Dover, N. H.

The Clearing House Editor at one time had a similar experience, but in this case found a short circuit in the wiring, which pulled an abnormally heavy current. He attributed the trouble to the magnetic effect of the current through the meter reversing the residual magnetism of the permanent magnet in the meter. Repetition of the trouble with the short circuit, after connections had been changed restored the meter to its original condition. Of course, it is possible that in your case the trouble was centered in the ammeter itself, but we are inclined to stick to the short circuit theory.

Clearing Up Electrical Troubles

Stop Light Blows Horn When Brake Is Applied

Q.—I would like to have some more Lincoln information. The trouble is in the horn blowing when the stop light goes on. The stop light and everything is standard equipment. It just starts to blow and then quits and will not blow again until the pedal is released and then applied again. I can disconnect the wire that leads back to the stop light and connect a drop light with a 6-8 volt bulb. Under these circumstances it does the same thing. I took another horn from another car that was o. k., and it blows just the same. I have the Lincoln wiring diagram and understand that the stop light gets its current after it goes through the horn.—California Subscriber.

You are mistaken in thinking that the stop light current should come through the horn. From a casual look at the diagram it may appear to be this way. We are showing a sketch, however, which gives the circuits of the horn and stop light. From the circuit breaker a wire comes down to a junction point and current would flow down this wire from the circuit breaker. At the junction point, however, the current would divide and part should go to the horn and part should go to the stop light. One possibility is that the horn is incorrectly wired and that current from the circuit breaker goes first through the horn and then to the stop light.

Another possibility is that when the brake pedal is moved that in some way a ground is produced in the wire between the horn and the horn button. We believe this is the most likely possibility. Another reason for believing that the trouble is due to a ground between the horn and horn button is that the horn blows only for an instant and does not blow again until you again press the pedal. If the wiring were incorrect you would have the horn blowing all the time the current was flowing to the stop light.

AMMETER HAND VIBRATES

Q.—You have been such a great help to me in all my troubles, so here I come again. What causes the ammeter hand on a car to vibrate from one side of the scale to the other when all terminals are clean and tight and switch, ammeter, and wiring in perfect condition. Could the action be caused by the generator giving out uneven current at regular motor speeds?—Charles Tuckfeld, North Branch, N. Y.

This may be due to a number of causes, and you may have to test to find out what makes the ammeter hand vibrate. One suggestion is to take the two wires on the generator cutout and connect them together so that the cutout is not in the circuit. This will cause direct current to flow from battery

Edited by A. H. Packer

to generator when the engine stands, but will make no great difference when the engine runs. If the vibration of the hand still continues, then it shows that the trouble is not in the cutout. Another possibility is in armature trouble. The next test to make, however, would be to try another ammeter if one is available. Any ammeter will do, such as one from a Ford car.

May Be Poor Connection

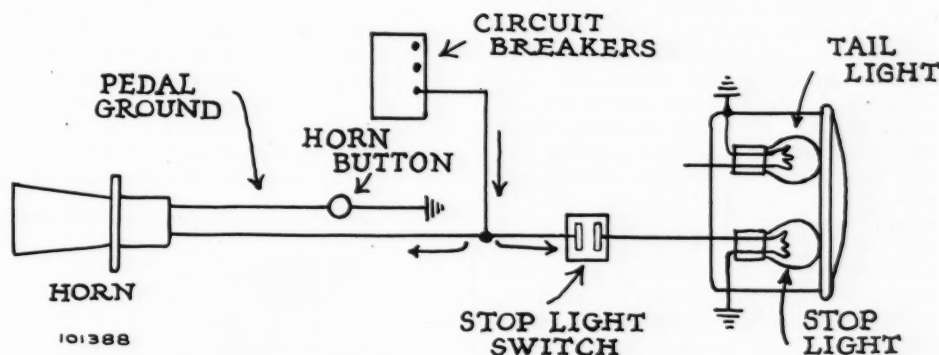
Trouble in the ammeter might be due to a poor connection inside the meter. At low engine speed when the ignition current is taken through the ammeter as is the case on most cars there is al-

A Bill Fixit Detective Needed Here

Q.—We have a generator that charges fairly well at a slow speed but when a speed of around 25 miles an hour is reached, the ammeter needle fluctuates very rapidly. What is wrong?—Southern Subscriber.

How to Run Down Trouble

We cannot tell you what is wrong, but we can suggest a way of testing which will run down the trouble. The trouble may be in a loose connection anywhere inside or outside of the generator. It may be in the cutout or it may be due to a poorly turned commutator or one in which the mica has been poorly undercut or it may be due to a poor brush



Horn and stop light circuits used on Lincoln

ways a tendency for the hand to vibrate back and forth. At higher engine speeds, however, this condition should not be noticeable.

WHAT "OFF NEUTRAL" MEANS

Q.—We had an Auto-lite generator which we could not regulate when the third brush was moved. We took the machine to an electrical service station and they said it was off neutral. I have an idea what this is, but I am not sure.—New York Subscriber.

The main brushes when adjustable are usually set on neutral by operating the generator as a motor with the third brush lifted. This sends battery current through the armature only. If there is a strong tendency for the armature to rotate it means that the brushes are in the wrong position. They should be moved until there is practically no tendency for the armature to rotate. In some cases it is considered permissible to have a slight tendency for rotation to take place in the normal direction. After the main brushes are properly set the third brush may be put back on the commutator and the machine tested again for output.

contact, caused by a sticking brush or one which has a weak brush spring. If you will take a separate battery and put it on the running board and use a separate ammeter and ground the battery and then connect up from battery to ammeter and ammeter to generator, you will see whether the trouble is in the generator or not. In doing this you will have eliminated all of the car wiring and the car ammeter, also the cutout.

A Test to Make

To eliminate the cutout only, you can take the two wires which go to the cutout and put them on the same terminal and run the engine. If the trouble is not in the generator as shown by perfect operation on the first test and if the trouble is not eliminated by the second test mentioned, then it is due to a poor connection. Then you could start by short circuiting the ammeter, that is connecting a wire right across its two terminals. You could then start putting wires in parallel with the different parts of the generator charging circuit until you found that you had eliminated the trouble. These tests should enable you to correct this condition.

NEW ITEMS OF SHOP EQUIPMENT

E-Z In and Out Universal Bushing Tool

WITH this tool it is stated that practically any bushing on any car or truck is speedily removed or replaced. It can be used on the car or bench. All parts are made of treated steel to resist wear. Referring to the illustration bushings are removed as follows:

Place sleeve (4) on the reduced part of nut (2), as shown. The plain portion of screw (1) is slipped through the bushing. An extractor collar (5), slightly smaller than the outside diameter of the bushing, is placed upon screw (1). The "C-Collar" (3) is slipped into the groove of the screw (1). Collar (5) is then placed in contact with "C-Collar" (3), the reduced part of which enters into extractor collar (5). The nut (2) is now rotated by a suitable wrench in a manner as to draw the screw (1) inwardly, which will force the extractor collar (5) into contact with the bushing and quickly draw the bushing from its bearing and into the sleeve (4).

In replacing a bushing the collar (5) and the sleeve (4) are removed from the screw (1). An insertion shoulder (6) is substituted for the sleeve (4). The bushing is slipped upon screw (1), the plain portion of which is then slipped through the bearing. The bushing having been placed in intimate contact with shoulder (6) and the bearing. The insertion collar (7) is now placed on screw (1). "C-Collar" (3) is slipped into the groove of screw (1). The nut (2) is now rotated, the insertion collar (7) engaging the bearing, and the shoulder (6) engaging the bushing, forcing the same into place.

For removing small bushings, No. 8 is a member that reduces the bore in sleeve No. 4.

It is never necessary to remove nut No. 2 from the screw. Only remove one bushing at a time from pistons.

The price of the tool is \$7.50 and it is

made by the Universal Manufacturing Co., Grand Rapids, Mich.

Miho Standard Growler

A GROWLER for testing armatures from automobile type generators and starting motors is announced by The Miho Company, 717 Sycamore St., Cincinnati, Ohio. It is also capable of locating faults in appliance motor armatures. A meter used in connection with the device enables the operator to tell with great accuracy the nature of the fault. An indicating snap switch is mounted on the base for convenience of the operator. The price is \$20.

Heavy Duty Tire Spreader

TO facilitate the repairing and inspection of large pneumatic casings the Wadsworth Core Machine and Equipment Co., Akron, O., has developed a tool to spread open the casing. In the Wadsworth heavy duty tire spreader, two bead hooks on a right and left hand screw, operated by a crank will spread the casing from 2 to 12 in. In this manner the inside of the casing is open for inspection and repairs. The tools are sold and used in pairs. The makers state that there is no danger of the tool letting go and that it is made of malleable castings and cold drawn steel.

Mayo No. 4 Press

AMONG the innovations in the way of shop equipment recently brought out is the Mayo line of Garage Equipment.

A feature of the Mayo line, distributed by David Lupton's Sons Co. of Philadelphia and Detroit, is the versatile No. 4 press. This portable tool makes many jobs easy, with its four set ups as a press and three as a puller. It will press gears on and off shafts; press hubs, bearings, and bushings; drive out pins, straighten shafts and pull clutches, fly wheels or sticky wheels.

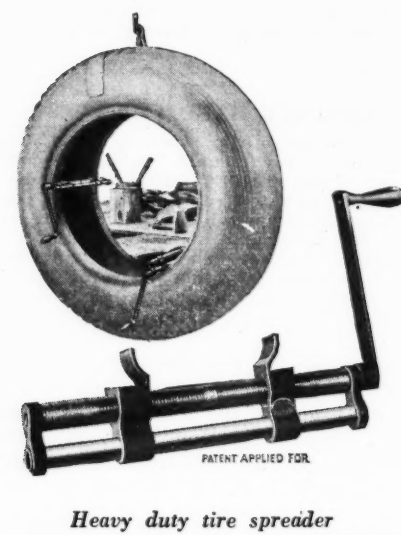
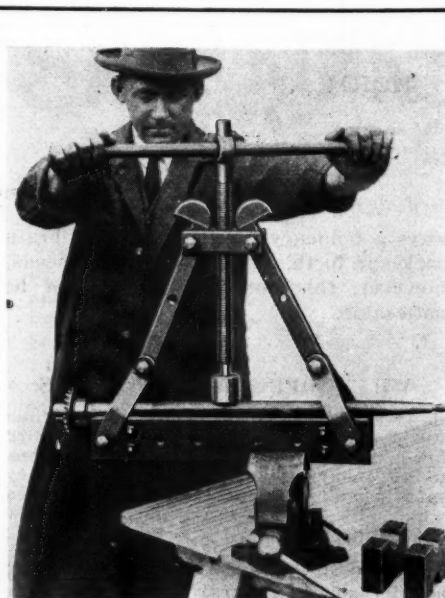
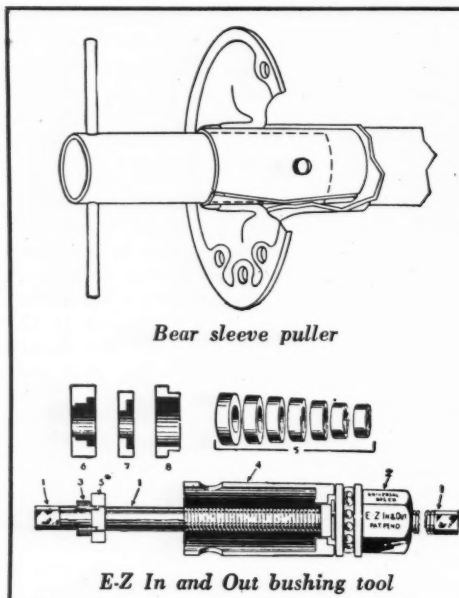
The Mayo No. 4 press has a capacity of 10 tons and weighs but 70 lbs. It is made of special steels. The operating length of the screw is 14 in. Maximum width of bed, 22 in. over all. It comes complete with additional bed blocks, hook bolts, etc., and is priced at \$30.00.

Bear Axle Gage and Sleeve Puller

THE Bear Mfg. Co., Rock Island, Ill., has recently put on the market the Bear axle gage, sleeve puller for the Ford rear axle and steel fingers, handy for all tight places. The first mentioned item is made for locating the pitch or caster of front axles and is equipped with a spirit level to assure accuracy. The dial is very simple, each line on it represents 1 deg. Getting the position of the wheel determines the position of the axle and by swinging the wheel to the left and then to the right the gage measures the travel of the spindle.

The Bear sleeve puller is made for the Ford and Ford truck rear axle roller bearing sleeve. It is constructed so as to remove the sleeves without damage. The price is \$2.50 for Ford cars.

The steel fingers are made with stiff springs to hold bolts, nuts and other articles. They can be used to pick up articles. The 12 in. size sells for \$1.00, 24 in. \$1.50, and 36 in. \$2.00.



SPEED UP SERVICE OPERATIONS

K. & S. Lifts and Carriers for Fords

K. & S. lifts for Fords are single motion jacks designed for the quick elevation of Ford cars in the shop or showroom. They are designed for those operations requiring the lifting of one wheel only. The Lift and Carrier will elevate one wheel separately or either axle as a unit. As a carrier the large double anti-friction caster wheels make it easily movable. The wheels can also be had fitted with rubber tires. The price of the service lift is \$7.50. The improved service lift for balloon tires is \$9. The price of the Lift and Carrier with iron casters is \$19.50 and with rubber tired casters, \$23. Made by The Kelley & Stewart Co., South Brownsville, Pa.

E-Z In and Out Wheel Puller

THE Universal Manufacturing Co., Grand Rapids, Mich., has recently placed on the market the E-Z In and Out Wheel Puller and Pinion Gear Puller. The advantages claimed for this tool are its universal application, floating drift acting independently of threads, friction ball keeping drift in place, drifts interchangeable with sleeves and impossibility to strip threads or swell axle.

The set sells for \$5.50 and is said to fit 98 per cent of all axles.

Manley Hydraulic Press

THE Manley Mfg. Co., York, Pa., is now manufacturing an hydraulic press of 35 ton capacity. It is claimed that this press is from eight to ten times faster than the ordinary screw press. It has two speeds, one for heavy work and another for lighter work up to 20 tons. This press is of the same general design as the No. 21-49, having a 42 in. lower table and a 24 in. clearance on the upper table. Both tables are of open construction which permits long crankshafts or rods to be inserted for straightening

work without setting them cross-wise and also allows wheels and wider work to be used under the hydraulic ram. A quickly adjustable third table is provided on the upper press. This eliminates the necessity of bringing the screw or plunger to the work. The price of the No. 7 plain 35 ton hydraulic press, with gage, weight 756 lbs., is \$168.

Ammco Universal Connecting Rod Aligner

THE Automotive Maintenance Machinery Co. has recently placed on the market the new Ammco Universal Connecting Rod Aligner. This aligner is adjustable for all sizes and types of connecting rods. Split bushings are offered for the arbor to fit all sizes of connecting rods. It is a rugged and accurate tool and incorporates a number of features which insure alignment of the sliding table with reference to the test arbor and permits the mechanic to check piston and connecting rod assemblies in a few moments, it is stated.

It is becoming more and more the custom for automotive shops to make use of equipment of this kind, which more or less automatically prevents comebacks on the part of the customer through work having been improperly done on account of misalignment of parts.

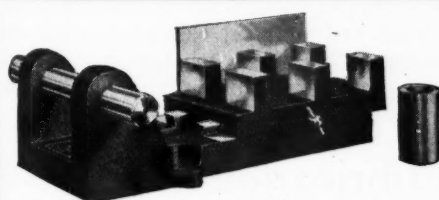
Delco Service Tools

DAYTON Engineering Laboratories Co., Dayton, Ohio, is now prepared to supply special service tools for use in electrical departments and electrical service stations. These tools are especially designed to do various jobs in the overhaul of Delco ignition and generating equipment. For example, one special device is known as a pole piece spreader and spreads the pole pieces to the proper diameter after a field coil has been installed. The screws which hold the pole piece in place are not strong enough for this job and the threads are usually stripped in trying to get the pole piece in place. If the pole piece does not reach its position the armature rubs and the job is defective. There are numerous other items in this catalog which are equally valuable. Additional information and sample catalog may be obtained from the Dayton Engineering Laboratories Co., Dayton, Ohio.

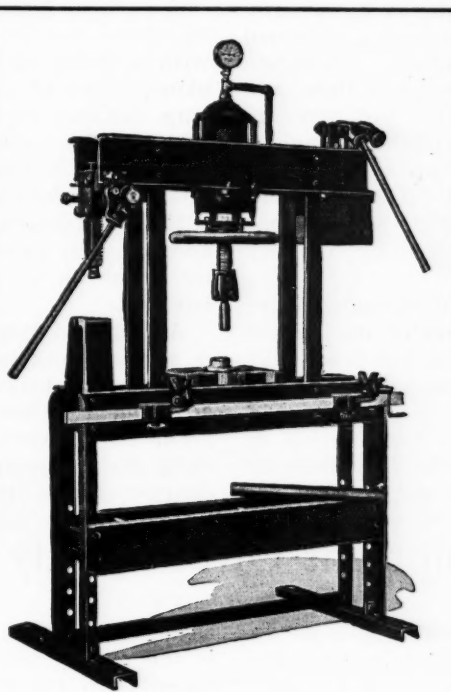
Curtis Air Mist System

THE new improved model of the Curtis air mist wash system, made by the Curtis Pneumatic Machinery Co., St. Louis, Mo., incorporates a water amplifier which builds up the necessary water pressure regardless of the initial water pressure. In fact the water may be taken out of a barrel or tank. This is done without in any way increasing the horse power necessary to drive the unit. The control valve is arranged for either body or chassis washing and a stream of water is completely atomized into an air mist, it is stated, so as to give the most effective cutting action for fast, thorough, and safe washing without damaging the finish of the car.

More and more interest is being shown by shops in regard to car washing outfits, it being realized that repair work can be more readily carried out on a car that is clean to start with.



Ammco universal connecting rod aligner



Manley hydraulic press



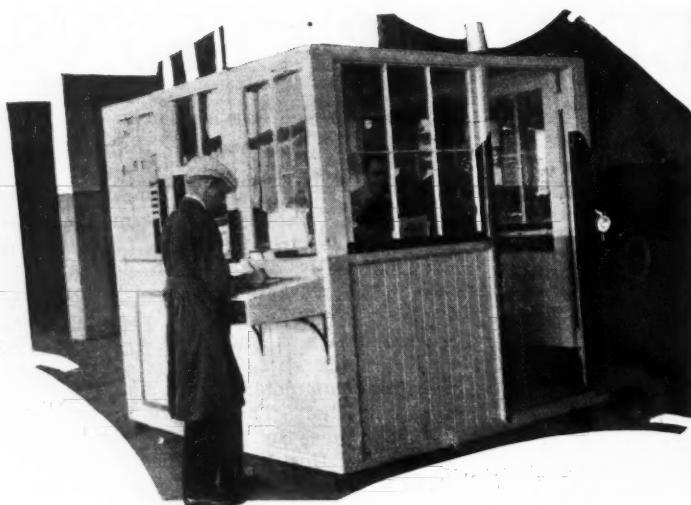
K. & S. lift carrier



E-Z pinion gear puller brought out by Grand Rapids, Mich., concern



E-Z In and Out wheel puller



Portable office of Howard Automobile Co., San Francisco showing exterior and interior, used in new car department. The company has a number of such offices which are moved about as departmental conditions change

Europeans to Race in United States

(Continued from page 15)

The method of driving the two overhead camshafts is somewhat unusual. On the front end of the crankshaft is a spur pinion driving a half time shaft occupying the position of the camshaft in an ordinary L-head engine. On the rear end of this shaft is a sprocket by means of which chain drive is secured for the two overhead camshafts; the chain therefore runs at half engine speed. Adjustment of the chain is provided by an idler sprocket.

The valves, at an angle of 90 deg., have screwed on their extremity a small steel piston sliding in a cast iron guide in the cylinder head, and having set in it a hardened roller with which the cam comes in contact. To secure adjustment between cam and valve, the rollers are changed, this being done by removing the pin carrying them in the yoke on the head of the piston. Various sizes of rollers varying by one-tenth of a millimeter up and down from a standard, are kept for adjustment. This device eliminates all side thrust on the valve stems and even with 100 lbs. valve springs gives a very easy camshaft drive.

Use is being made of a special type of shrouded valve by means of which the port is not uncovered during the first portion of the movement of the valve, but practically maximum opening is obtained at a given point and the shut off is almost instantaneous.

The cooling water is circulated by a combination of pump and thermo-syphon. The main piping is sufficiently big to allow a thermo-syphon flow, but within this are

set copper water pipes of about 10 mm. (.39 in.) internal diameter by means of which the water is directed under pressure around the exhaust valve seatings.

Lubrication is under pressure, with a very big supply of oil carried in a reserve tank alongside the driver's seat. The sump is dry, two pumps being used, one for scavenging and the other for feeding the engine, and the lubricant is passed through an oil radiator under the water radiator.

A vertical Rootes blower, driven by skew gearing from the front end of the crankshaft, is used in conjunction with a Solex carburetor. For short distance work the blower runs at one and one-third engine speed, but for long distance racing it probably will be run at engine speed. The carburetor is on the forward right hand side of the cylinder block, with its funnel shaped air inlet facing forward through the engine hood.

Unit construction of engine and gear box has been adopted, the two-seater car having center control with the driver on the right. The steering column is perfectly horizontal.

A standard type Perrot front axle with Perrot brakes is used on both cars. All brake gear, with the exception of the short lengths of brake camshafts is enclosed and adjustment of both front and rear set can be carried out from the driver's seat. The single seater car differs from its companion in being narrower and in having quarter elliptic springs at the rear.

Modern Equipment Gives Speedy Lubrication

(Continued from page 17)

tion in one minute and lowered to the floor in 45 seconds. If only one end of the car is to be raised only one valve is opened.

One of the most important things to bear in mind in rendering chassis lubricating service is that of cleanliness. It is pretty well known that a good many service stations and even gasoline filling stations throughout the country have built up a good business on the item of cleanliness and appearance alone.

The thought of oil and grease often suggests to the car owner dirt and disorder and one of the first things the dealer should do, if he is going to specialize in chassis lubricating service, is to see that everything is spotlessly

clean. The chief item causing an unsightly appearance is the old oil taken from crankcases and the lubricants taken from the differential and transmission. This unsightly appearance is not necessary if arrangements are made to drain the lubricants directly into some form of apparatus that takes it out of sight. If there is a basement a way can be provided for draining old lubricant into receiving barrels or drums below.

Always protect the customer's car with fender and seat covers while the process of lubrication is going on. It should also be the duty of the last man that works on the job to see that there are no traces of oil or grease left on the exposed parts of the car.

EDITORIAL

Letting the Public Know

IF there is any fault that marks the maintenance division of the automotive industry more than any other it is failure to take the public into its confidence.

Day after day when the newspapers and magazines of general circulation are filled with new car advertising we find little or nothing in printed form to indicate that there are good and reliable firms ready to fix up motor vehicles in first class condition and at reasonable prices.

The repair shops are hiding around the corner and failing to let the car owner know what they have to offer him. When they advertise at all, as many of them do in the small towns, it is to carry a standing ad simply saying that So-and-So's garage "does good work at reasonable prices."

Some of the more progressive dealers make a definite effort to sell their maintenance service by direct mail advertising to a selected list of car owners. When the right kind of appeal is made, and when the dealer has a maintenance division really worthy of the name, this sort of advertising usually produces a lot of business.

As it stands now the car owners usually have repair work and overhauling done from necessity. With most of them it is a last resort and they have done only that which they cannot get along without.

More and more owners would have their cars tuned up, overhauled, lubricated regularly, painted and generally kept in good condition, from choice if only the proper appeal were presented to them regularly and attractively.

A Handsome Profit

AN automobile dealer and distributor who has been unusually successful recently wrote the editor an extensive letter discussing the early shortcomings and the later successes of his business. One paragraph from this letter reads:

For the first two years of this company's existence I am afraid that we looked upon the repair department as a necessary evil rather than a possible source of revenue, and it was only because of careful analysis and study of the situation that we discovered that this department could be made to pay a very handsome profit.

This dealer, like many others, probably considered his repair department merely as an adjunct to the sale of new cars, and not as a maintenance division. He probably would have been glad to pass the cars out to customers and have nothing more to do with them. But competitive conditions demanded that the dealer be prepared to fix up the customer's car whenever it suffered an accident or failed to run right.

A certain amount of service in the way of adjustments and correction of defects, if any, was considered due the customer without charge, and rightly. But it seems there was a failure to realize that the regular and constant use of the vehicle required a maintenance service that in itself was destined to grow into a vast market full of potential profit.

Today wherever you find a successful dealer with a profitable repair department, or maintenance division, you find one who ungrudgingly gives that small amount of

free service that should be necessary, who sells maintenance service on a business basis, and who stands behind every job he turns out.

Many progressive men, not connected with the sales of new cars, have found that it pays them handsomely to supply the high grade of maintenance service now required by car owners.

Surely there is in it a handsome profit.

Who Will Sell Commercial Airplanes?

INFORMATION gathered from several manufacturers engaged exclusively in the building of popular priced commercial airplanes indicate they believe the automotive distributor and dealer should be the proper outlet for their products.

In the selling of an airplane it is even more essential than in the selling of an automobile that proper merchandising, sales and service principles be employed. Most airplanes up to the present have been sold through the cruder method of direct dealing of the purchaser with the manufacturer, though a few companies now have appointed distributors. The latter often do not understand selling in the automotive sense, service is unheard of, and business is transacted over the week-end.

The plane manufacturer is not satisfied with these conditions and he is looking toward the automotive dealer for support in merchandising his machines. It is never to be supposed that the plane is to compete with the automobile as both are essential to each other for rapid transit over long distances.

Since the first of the year four manufacturers in a city well known in the automotive industry have gone into quantity production on commercial airplanes and aero engines. One company is tooled to produce 100 engines by July 1, while a plane manufacturer has orders on his books for the delivery of 35 planes by June 1.

Not a Contest

IT is not right that business should be a battle between the various producing agencies and their respective distributing outlets.

Too often we find retail dealers in fighting attitude wanting to know why something is not done for the dealers. And far too often there is good reason for these dealers to ask the question. It is unfortunately true in a great many cases that manufacturers do not give fair consideration to the retailers without whom the manufacturers could not prosper.

The dealers who as a class probably lead all others for success in the automotive business have been fortunate in working with a factory organization that has done everything in its power to help its dealers make money. The result is an exceedingly loyal group of retail representatives and an assurance of continued business.

In this business we need more examples of dealers and manufacturers working WITH one another rather than the one working FOR the other.

INDUSTRY STILL SETTING RECORDS

Total Output in First Quarter Is 1,138,409

Several Companies Report All Former Sales Marks Broken Late in March

NEW YORK, April 7.—The motor industry continues to make new records. The total of 447,185 cars and trucks set a production mark for March, and brought the first quarter's aggregate to 1,138,409 vehicles, a record for the period. The better weather for the last three weeks has caused the expected upturn in sales and for the first time in several months they are nearly equal to production, and should shortly be running well ahead of the output rate of the factories.

Business from the beginning of the year has been bettering the averages of recent years, in sales as well as in production. Therefore dealers' stocks, while heavier than they were a year ago at this time, are not too great to be absorbed without difficulty in the next six or eight weeks.

Several companies reported individual sales records for the last two weeks in March. In fact, all indications point to the remarkably strong spring market and one of the best first half-years the industry has ever experienced. Some slackening later on is looked for, as many capable observers expect that sales and production in 1926 will about equal 1925—an eminently satisfactory year for all concerned, but which got off to a slow start, with greatly curtailed production in the first quarter.

Whatever increase is shown this year over last will probably be due in large measure to export sales, which are expected to run from 100,000 to 200,000 higher. On the basis of sales to date, truck and bus business should also show a substantial gain, unless the general industrial situation takes an unexpected turn for the worse.

With automobile prices holding well at previously established levels, with raw material prices still tending downward, and with high rates of production, the manufacturing companies are in excellent financial condition. Inventories built up during the winter are now being turned into cash, enhancing their position in this respect.

Warfield Joins Collins

BOSTON, April 5.—E. E. Warfield, formerly vice-president in charge of sales of the Gill Manufacturing Co. of Chicago, has been selected general sales manager of the George Collins Co., jobber and distributor of automotive equipment, Boston. Mr. Warfield entered the automotive industry in 1908 as a jobber salesman. He then became sales manager of Wetmore Savage Co. of Boston.

He was three years first vice-president of the Automotive Manufacturers' Association and was one of three on the board of control of the Automotive Equipment Mart in Chicago, one of the principal activities of the association. In 1925 he was chairman of the sales service committee of the association.

M. & A. M. A. Elects Black

NEW YORK, April 5.—H. L. Horning of the Waukesha Motor Company, president of the M. & A. M. A., has announced the appointment of S. Duncan Black, president of the Black & Decker Manufacturing Company of Baltimore, to the association board of directors to fill the unexpired term of R. W. Procter of the same company, who resigned.

Cadillac Output Doubles

DETROIT, April 5.—Production of Cadillac cars for the eight-months' period ending March 31 was exactly double the production for the corresponding period a year ago. Shipments from the plant have followed the same ratio, and deliveries to consumers, delayed in many parts by unsettled weather conditions, will be equalized at the same rate as soon as weather permits, the company announces. Retail sales of V-type eight-cylinder Cadillacs since their introduction 12 years ago total more than \$750,000,000. The doubling of Cadillac sales during the last eight months means a tremendous increase in the investment in high grade cars by owners.

Same Crescent Policy

JAMESTOWN, N. Y., April 5.—The same policy under which the Crescent Tool Co. has built its business is now in force and is being applied as rapidly as possible to the selling of the Smith & Hemenway line of tools which was purchased recently by the Crescent company. Sales will be handled exclusively through jobber-dealer channels and the Crescent policy of price protection will be followed. Merchandising activities designed to assist wholesalers and retailers in getting more rapid turnover also will be carried on. The Crescent line will continue to be produced as a specialized line and, with the addition of the Smith & Hemenway forged tools, the Crescent company will be able to give better service to the trade.

Chevrolet Output Up

DETROIT, April 5.—Chevrolet Motor Co. produced 65,041 cars in March, it was announced today. This exceeds all previous monthly records for the company. The March production was 23,658 more than for March, 1925.

Jordan Cuts Price

CLEVELAND, April 5.—Jordan has just announced a cut of \$250 in the price of the Great Line Eight seven passenger sedan, effective today. This makes the price \$2675.

Hanch Warns California Against "Selling" Terms

Manager of N.A.F.C. Assaults Stronghold of Low Payments with Facts

LOS ANGELES, April 5.—Into the stronghold of low down payments and long deferred maturities in automobile financing, C. C. Hanch, general manager of the National Association of Finance Companies, brought an emphatic warning to Southern California distributors and dealers, at a meeting held in Los Angeles under auspices of the Motor Car Dealers' Association, that automobile selling on the installment plan must be kept on a sound basis if the automotive business is to continue in a healthy condition.

Hanch vigorously assailed practices which have been particularly in vogue on the Pacific Coast, of "selling terms and not automobiles," and urged in the interest of permanency and prosperity of automobile dealers that they stick to the standard basis of financing, with one-third down and twelve equal monthly payments on new cars, and 40 per cent down and 12 equal payments on used cars. Eighteen months is now the almost universal financing period allowed by dealers in this section.

At the conclusion of Mr. Hanch's address, he was made the mark for a veritable battery of questions from the distributors and dealers present, who clearly showed that they had been aroused to the importance of saner financing policies.

With repossessions now running high in most sections of the coast, following the particularly wild financing orgy last fall, Mr. Hanch's analysis of the effect of low down payments and excessive terms on "come backs" proved particularly interesting to the gathering. Mr. Hanch declared that the average loss per repossessed car with 16 to 18 monthly payments is nearly 57 per cent higher than on the repossessed car with 12 monthly payments.

Mr. Hanch declared that automobile manufacturers, dealers and finance companies must cooperate to avoid unsound policies or practices if bankers are to continue to loan the money required by prudently managed finance companies so a large production of automobiles may be continued.

Powers Joins Babcock

MILWAUKEE, April 5.—Kent S. Powers, formerly of the Standard Spring Mfg. Co., Minneapolis, has become associated with the Babcock Automobile Spring Co., Milwaukee, as vice-president and manager of the Milwaukee plant.

March Production Totals 447,185 Motor Vehicles

N. A. C. C. Estimate Places Output Far Ahead of Three- Year Average for Month

NEW YORK, April 5.—New March records in sales and output were reported to the directors' meeting of the National Automobile Chamber of Commerce held in New York. The production total based on individual factory shipping statements is estimated at 447,185.

While the figure reaches a new high, it is not out of line with the trend of growth, being close to the normal line. March is always one of the high production months. This year it is 18 per cent ahead of the average for March in the last three years, but this is not taken by the industry to indicate that 1926 will go very far ahead of 1925. It is felt that last year was an excellent business year and that a normal increase will be as much as can be expected.

Several companies reported in various sections that sales had broken all records during the last few weeks. February was virtually a closed month for the northern belt of the country due to the bad weather, with the result that stocks increased during this period and orders were delayed until March.

The Government tax reduction on automobiles which has been credited to the consumer by the manufacturers is now in effect and is expected to have a healthy influence on sales.

While March was a new high for the third month, it was the second high for all time as October 1925 registered an output of 452,486.

Figures for this year are: January 315,892; February 375,332; March 447,185. March last year was 377,252. The three year average for March, 1923, 1924, 1925, was 378,166.

Paige Shipments Gain

DETROIT, April 5.—Paige shipments during March, according to figures given out at the factory, totaled 3,200, an increase of 2,670 as compared to March 1925. A total of 7,618 Jewetts were shipped during the first three months which, with the number of Paiges shipped, bring the total up to 13,892 for the first quarter. H. M. Jewett, president of the company, looks for a continuation of the increasing sales in the industry. He bases his opinion on the daily influx of orders which are coming into the factory. These orders have been responsible for increasing the Paige output in April to 5,660, a 2,460 increase over that of March.

N. T. D. A. Seeks Facts

NEW YORK, April 5.—A questionnaire has been sent by the National Tire Dealers' Association to all its members to determine facts concerning the industry as of April 1. The questionnaire asks

the number of high pressure tires on hand April 1, the number of balloons, the number of tubes, the number of bus and truck pneumatics and the number of cushion or solid tires. Five more questions relating to dating orders, second line tire sales, price drops and general business conditions are contained in the list. The association urges that every member answer the questionnaire at once as it desires to make a comparison of this report with the government survey which is also being made as of April 1.

L. F. Murphy New Velie General Sales Manager



L. F. Murphy

MOLINE, Ill., April 5.—Announcement of the appointment of L. F. Murphy as general sales manager of the Velie Motors Corporation, having been promoted from the position as assistant manager to succeed C. W. Hadden who is leaving the automotive industry. From 1913 to 1919 he was connected with the Ford Motor Company as special representative in domestic territory and also in the foreign sales division, promoting Fordson tractor development. After the war, from 1919 to 1921, he was in the employ of the General Motors Export Company, where he received valuable training in export development work and general merchandising. In 1921 Mr. Murphy joined the Studebaker Corporation and for two years served in the capacity of special sales representative, traveling throughout the United States and Canada. Subsequently, he was appointed branch manager of the Studebaker branch at Indianapolis, with entire charge of retail and wholesale distribution.

E. H. Gunther with Auburn

AUBURN, Ind., April 5.—E. H. Gunther has been added to the sales force of the Auburn Automobile Company and will be in charge of sales promotion.

Nash-Ajax Ships 16,265 Automobiles Last Month

Gain of 14.9 Per Cent Registered Over Previous Best Thirty Days

KENOSHA, Wis., April 5.—Again the Nash Motors Company has shattered all previous sales and production records, March having hung up a new high record which establishes it as the biggest Nash-Ajax month in the history of the company.

Total Nash and Ajax shipments in March were 16,265 cars. This is the nineteenth consecutive month, with a single exception, that Nash business has shown an increase over the corresponding month of the previous year.

"Nash and Ajax shipments of last month exceed the previous largest month—February, 1926—by 14.9 per cent," said E. H. McCarty, general sales manager of the company. "Even then production was not sufficient to supply 1518 additional bona fide orders. Export shipments, of course, are included in the foregoing figures and, while domestic sales were the greatest of any month, at the same time our biggest volume of export business was recorded during March.

"Not only was March the largest combined Nash-Ajax month, but taken individually it was the biggest Nash month and the biggest Ajax month. The total Nash shipments alone exceeded the Nash shipments of March, 1925, by 59.2 per cent, while the combined Nash-Ajax shipments last month were 108 per cent greater than the total shipments of Nash Motors in March a year ago."

Total shipments in January, February and March this year were 41,794 as compared with 20,369 Nash cars during the same months of 1925.

Big Hardwood Order

SAN ANTONIO, Tex., April 5.—An order for 1,000,000 feet of bone-dry, air-seasoned oak for the manufacture of automobile bodies and cabs has been placed by the San Antonio Body Company with the Federal Supply Company, through E. C. Parker, representing the latter company. The cost of oak and hickory, as well as other materials, has been steadily increasing, and it has been impossible for almost two years to buy on the open market any hardwood which was thoroughly dry. The San Antonio Body Company has for more than one and a half years carried large stocks of oak lumber in order to be in a position to supply at all times thoroughly air-seasoned material. This is said to be the largest single order for hardwood for Texas manufacturing purposes ever placed in the state, and is an indication of the optimistic outlook for the increased use of bodies and cabs.

Want Ads Sell 75 Per Cent Of Used Cars, Survey Finds

Research Shows It Only Method That Keeps Cost in Proportion to Value

LOS ANGELES, April 5.—More than 75 per cent of all used cars sold are moved as the direct result of contacts established with prospects through classified advertising, if the situation in Los Angeles can be accepted as typical, according to a survey made by Thomas J. Smith, of the Smith Engineering Company, specialists in automotive research and production engineers.

"Our survey shows that without the want-ad the automobile dealer would be almost helpless in moving his used cars," says Smith. "It is the only method of advertising used cars in which the cost can be kept within reasonable bounds. With want ads it costs an average of \$5 per car to sell the low-priced machines. With the higher grade cars, the cost is approximately 2 per cent of the gross sales price.

"The automobile dealer can certainly thank his stars that someone, some time, invented the want ad. Statistics show us that on 80 per cent of all cars sold for \$1000 or less in Los Angeles, another car is traded in; that on cars selling from \$1000 to \$2000, 87 per cent of the sales call for the handling of the purchaser's old car—and after you reach the class above the \$3000 mark the percentages of trade-ins on sales reaches more than 97.5 per cent. In addition, the average dealer must accept other cars as trade-ins on the used car which he has taken in on a new buy. In the \$1000 or under price class 35 per cent of his sales of used cars involves the acceptance of another used car as part of the deal—and this percentage reaches as high as 80 per cent with cars bringing more than \$3000. The case with one of Los Angeles' most prominent automobile dealers may be cited as typical. For every 220 new cars this dealer sells he must also sell 314 used cars accepted in trade.

"In a careful comparison of classified advertising writing as regarding the sale of used automobiles over a period of months, the following facts were deduced. First, that advertising a car for sale without a description of it and without mentioning the price is virtually useless. Second, that the listing of the down payment required is almost essential. Our survey shows that the grouping of a long list of cars in one advertisement merely mentioning the make and the total price, does not pay in the same ratio that the individual, properly worded advertising does."

Racing Limits Set

PARIS, March 24.—(By Mail)—Racing under the 91½ cubic inch rule will be continued in Europe until the end of 1927, according to a decision of the Inter-

national Racing Board just held in Paris. In principle it was decided that from January 1, 1928, superchargers will not be allowed on cars competing under a piston displacement rule. The meeting was attended by delegates from America, France, England, Italy, Belgium, Germany and Switzerland. William S. Hogan represented the Automobile Club of America. With a view to decreasing the number of records, the international board decided that recognized distances should be limited to 50, 100, 500, 2000, 3000, 4000, 5000 kilometers or miles, and from this by stages of 5000 kilometers or miles up to a maximum of 30,000 miles. Time records beyond 24 hours are not recognized, but distances requiring the cars to run more than 24 hours can be submitted for official acceptance.

Goodman Joins Marmon

INDIANAPOLIS, April 5.—Announcement is made that Dan C. Goodman, former automobile editor of the Indianapolis Star, has been appointed advertising manager of the Marmon Motor Car Company and has assumed his new duties. Previous to his newspaper work of recent years Mr. Goodman was advertising manager of the local Ford assembly plant and later gained experience as a Ford dealer and as a factory representative.

Rene de Knyff Resigns From French Race Board

PARIS, March 24.—(By Mail)—Rene de Knyff, chairman for the last 31 years of the racing board of the Automobile Club of France, resigned his position this week as the result of adverse votes given at the general meeting of the club. Discontent with those responsible for the control of racing in France has been manifest for the last two years and particularly violent attacks have been made against E. Surcouf, vice-president of the board. At the annual meeting Surcouf received 300 adverse votes, thus indicating that the club members disapproved of his policy. De Knyff, however, supported him and as a consequence also received adverse votes. On the voting being announced both president and vice-president resigned their positions.

Rene De Knyff, vice-president of the Panhard Levassor Company, competitor in many of the early European road-races, has played a more important role in automobile racing and competitions than any man living and his resignation will doubtless involve the formation of an entirely new racing board and marks the beginning of a complete change of policy in France.

It is claimed that the French racing board is composed of men connected with firms which no longer take any active interest in racing and that they no longer represent the spirit of the times. The partial failure of last year's French Grand Prix race and the small measure of success which has attended this year's annual race have done much to destroy the prestige of the French racing board.

Argonauts Engage Pilot For N. Y.-Paris Flight

Capt. Fonck Will Drive Plane Built by Sikorsky Especially For Atlantic Trip

NEW YORK, April 5.—Capt. Rene Fonck, French ace, with two Americans, a pilot and a navigator and wireless operator to be chosen by him, has been engaged by the Argonauts, Inc., to attempt a non-stop flight from New York to Paris between June 20 and July 1 for the \$25,000 standing prize offered by Raymond Orteig, proprietor of Hotels Brevoort and Lafayette, for the first successful flight between these points.

The plane will be ready about May 15 and was designed by Igor Sikorsky, builder of bombing planes for the Russian government during the World War and constructor in this country of the Yorktown, first twin-engine plane built here to fly on one engine.

The plane is being built by the Sikorsky Aero Engineering Corp. at Roosevelt Field, L. I. It is a cabin biplane with large upper and small under wings and with three 425-horse power air-cooled Gnome-Rhone Jupiter engines obtained in France as a special concession.

The plane will have an estimated cruising range of 4,300 miles against a flight of 3,660 miles via Boston, Halifax, Cape Bonavista, across the Atlantic to Cape Clear, Cherbourg and Le Harve to Paris. The distance is about twice that covered by Alcock and Brown on their flight from Newfoundland to Ireland. The plane will be able to fly on any two of its engines and will be equipped only with landing wheels, except that the dead space inside the wings and body will be filled with water-proof air bags. About 36 hours are estimated for the distance. With its total weight of 24,000 pounds this is the largest plane Sikorsky has designed. It is designed for high speed of 160 miles per hour and cruising speed of 140.

Delage to Enter Grand Prix

PARIS, March 24.—(By Mail)—After announcing that he would not take part in the French Grand Prix automobile race, on Miramas track, as a mark of his disapproval of the policy of the Automobile Club of France, Louis Delage this week gave out the statement that he is about to put three cars into the French speed contest. As the result of Delage's abstention only six cars—three Darracqs and three Sima Violets—were entered for the French Grand Prix when the lists were closed at ordinary fees. There being no reservation clause, the club would have been obliged to run the race with this small number and to award totality of the prize money amounting to 190,000 francs. It is thought that Delage's entry will induce Bugatti to come into the race and probably will decide the Fiat Company to enter.

Buffalo Sales Show Gain Of 10 Per Cent in March

Spring and Early Summer Rush Indicated by De- ferred Orders Held

BUFFALO, N. Y., April 5.—Reports from dealers and distributors indicate that car sales for March followed the pace of February, estimated at 10 per cent higher than the same period last year. Dealers also report booking many orders for drive-away May 1, indicating that spring and early summer business will be much higher than last year.

Buffalo automotive factories, almost without exception, report activity far in excess of last year at this period.

Automotive equipment wholesalers reports vary, but some depressing reports are of a seasonable or individual nature. Spring business is expected to develop splendidly.

Tire dealers in some cases find themselves caught with heavy stocks bought at high prices and are disgruntled at price cuts. Purchases, however, are keeping pace with car sales.

The used car situation is not good, but is better than last year. Dealers have been more careful up to this point about taking cars in trade.

Will Distribute Peerless

INDIANAPOLIS, April 5.—The Chilson-Bohanon Sales Company has just been organized here and taken over the Peerless to distribute in Central Indiana. O. A. Chilson, president of the new organization, is a veteran Peerless organization man of this territory. Stanley E. Bohanon, secretary-treasurer of the new company, was the Hartford factory sales agent for this territory and for several years has been identified with the Auto Equipment Company of this city, a parts and accessory jobbing concern which he organized.

French Amateur Breaks 100 Kilometer Records

PARIS, March 24.—(By Mail)—Driving a straight-eight sleeve valve Panhard Levassor of 85x140 mm. bore and stroke (388 cubic inches) on Montlhery track, the amateur Ortman this week lowered the world's 100 kilometer record to 29 min. 44 7/100 sec., being an average of 125.38 miles an hour. The fastest lap was made in 44 1/5 sec.; or at an average of 128.96 miles an hour. Tire failure prevented the car continuing for the 100 mile record.

The Panhard Levassor used for this record run is practically a stock model, the engine having higher compression and special timing and a light single seater being fitted. Its total weight is nearly 4000 pounds. A few days previ-

ous the same car captured the 50 kilometer and 50 mile records at an average of 124.34 miles an hour; these had been held by a four cylinder sleeve-valve Voisin.

Garfield and Pellissier, handling a six cylinder side valve Renault of 100x160 mm. bore and stroke (556 cubic inches) have broken the world's 500 kilometers record in 2 hrs. 48 min. 11 6/100 sec., average speed 110.84 miles an hour. The fastest lap was made at an average of 120.25 miles an hour. The previous 500 kilometers record had been held by Lefevre on a sleeve valve Voisin in 2 hrs. 53 min. 46 73/100 sec. Both performances were made on Montlhery track.

Judge Lary Retires

SAN ANTONIO, Tex., April 5.—Of more than passing notice in South Texas automotive circles was the announcement of the retirement from business a few days ago of the Burton-Lary Motors Company. It was said that the advancing years of Judge S. D. Lary of Fort Worth, owner of the business, caused him to retire from the automobile field. The Chandler line will be represented in the future in San Antonio and surrounding territory by the Southern Motor Sales Company, already dealers and distributors for the Cleveland Six.

Good Attendance Feature Of Evansville, Ind., Show

EVANSVILLE, Ind., April 3.—Reports by exhibitors on attendance at the Evansville Style and Auto Display, which closed today are encouraging. A good attendance was noted throughout the week.

The automotive section provided showing for 23 cars. Makes of cars represented in the display were Hupmobile, Huber Motor Sales Company; Star, C. W. Bowles; Oldsmobile, Merkel Motor Company; Moon and Kissel, C. Leggett and Son; Jewett, New Day Auto Company; Nash, Evansville Nash Motor Company; and Federal truck, J. F. Charley Auto Company.

Booths provided for displays and demonstrations. The Marland Refining company, H. F. Koch Stations company, and Indian Refining company featured fuel oils and lubricants; Holland batteries, Rex Battery Sales Company; Duco finish, C. F. Curtis; Simplex Piston Rings, F. W. Bilton; automobile glass, Service Glass company; electrical accessories, Automotive Electric Service Corporation; radiators, Bill, the Radiator Man. Local merchants supplemented the automotive displays by exhibits of spring fashions in wearing apparel.

Takes Moon Distribution

COLUMBUS, O., April 5.—The Payne Motor Sales Co. has been made central Ohio distributor for the Moon and Diana Eight. B. W. Payne, Jr., is at the head and his brother, M. M. Payne, is connected with the concern.

Stutz Builds 1,000 Cars In Seventy Working Days

Moskovics Declares Output Will Be Doubled Within Next Three Months

Indianapolis, April 5.—“Our one thousandth car has come and gone with the Eastertide and we are feeling pretty happy,” says F. E. Moskovics, president of the Stutz Motor Car Company of America, Inc.

“The industry knows that our actual production line was not started until January 9. The immediate acceptance of the New Stutz safety chassis and an overwhelming demand by distributor and consumer alike compelled us to rearrange our original plans, and a doubling up of raw materials and finished parts of everything entering into the make-up of the finished unit complicated our problems materially.

“The very newness of the car, our own newness, for that matter, in the production of a car in its price class with the eyes of the industry focused upon our every move, compelled us to watch our every step and make progress cautiously—a necessary condition accentuated by the controlling factors that hardly made for speed.

“Every handicap and drawback notwithstanding, less than 70 working days finds us with our thousandth car shipped from the factory. We'll double that production in the next three months without a doubt. Our dealer body is clamoring for more cars, many of them doubling and trebling their original orders and the actual demand has not really started from the army of consumers.”

California Sales Gain 25 Per Cent in Month

SAN FRANCISCO, April 5.—Passenger car sales did not pick up during March in northern and central California as expected, being only about 25 per cent better than February, which was a low month. Parts and equipment dealers, however, report steady increases in business since the first of the year until March showed an advance of nearly 50 per cent over March of last year.

Used cars, according to reports of trade associations, are moving about 50 per cent faster than they did in February and nearly 20 per cent better than in March a year ago. There is a strong tendency in this territory either to repair the old car or buy a rebuilt used car, rather than purchase a new one.

Trucks are going better on seasonal demand and on prospects for heavy crops with high prices. Loans on cars are being held very low by finance companies and a number of banks in San Francisco are refusing to loan money on real estate when the money is to be used to buy an automobile.

March New Car Sales in Salt Lake Gain Heavily

Used Automobiles Selling at Normal Rate with Closed Models in Demand

SALT LAKE CITY, April 5.—The automotive business in Utah has been making big gains during the last month. The weather has been very favorable and the increase in the sale of passenger cars is especially marked, though truck sales have picked up, too. Few buses are being marketed at present, though confidence in the bus business is better now than it has ever been in this state.

The used-car situation is unchanged. A number of dealers report their stocks very low, but others continue to have considerable trouble in disposing of their used stuff as fast as they take it in. Several open used-car markets are being established, one of them being jointly owned by two prominent distributors handling different makes of new cars. There is a good demand for used cars in closed models, but if open model machines in the used class are more than one or two years old it is hard to get any one to look at them.

Competition is unusually keen in both new and used-cars. The "Metropolitan" dealer plan is filling Salt Lake City with dealers, but business is better in this city than in any other part of the state at this time. All grades of cars are in demand, i. e., light, medium and heavy weights.

For the weeks ending March 20 and 27 registration of new cars and trucks showed 354 cars and 26 trucks and 372 cars and 39 trucks respectively. For the corresponding period in February the figures were respectively ??? cars and no trucks and 180 cars and 38 trucks.

The industrial situation continues excellent and business men in every line, including automotive, are looking for business to be unusually good right through the present season.

Denver Plans Show

DENVER, April 5.—The Denver Automobile Dealers' Association is behind the annual Denver Post outdoor automobile show, and has appointed O. L. Davis, Jr., as chairman. Mr. Davis is the vice-president of the Mountain Motors, Inc., Packard dealers. Doc Kinney of the Denver Post is show manager. The time has been set for August 3-6 and the show will be held in the Civic Center as in the past.

Firm Changes Name

NEW YORK, April 5.—The name of the Stratton-Bliss Co., distributor of Oakland and Pontiac cars in the metropolitan territory, has been changed to H. L. Stratton, Inc., as of this date. The company was originally the Colt-Stratton Co. and has been distributing cars in the New York territory since 1909.

NEW Automotive Literature

TRADE STANDARDS adopted by the Compressed Air Society. Second edition. A 48-page pamphlet embracing the nomenclature and terminology relating to air compressors; a history of the development of speeds of air compressors; an explanation of capacities and pressures; instructions for the installation and care of air compressors, and a partial list of the applications of compressed air. Published by the Compressed Air Society, 90 West Street, New York, N. Y.

MUCH OBLIGED. By Irwin S. Cobb. An essay in pamphlet form on the need for a code of good manners among motorists. Contains a courtesy code of 14 points. Published for general distribution by B. F. Goodrich Rubber Co., Akron, O.

Chevrolet Dealers Meet

ST. LOUIS, April 5.—The presence of some 150 bankers from eastern Missouri, southern Illinois, and western Kentucky, and pithy declarations by General Sales Manager R. H. Grant of Chevrolet policy on financing car sales, lent added interest to the annual meeting and banquet of Chevrolet dealers in the St. Louis territory. Attendance of the bankers, who were present as guests of the dealers, was accepted as further evidence of the standing that has been won by the automobile merchant in general. About 600 dealers and bankers attended the afternoon business session, at which used cars, sales policies, and other matters were discussed by Grant.

Flint Branch Moves

DES MOINES, April 5.—The Iowa Flint Co. direct factory branch has been moved from 1122 Locust Street to larger quarters at 1112-14 Locust Street.

"Hacker" Tags Fought by Drive-it-Yourself Firm

WASHINGTON, April 5.—The right of municipal authorities to compel "Drive-it-yourself-car" systems to brand their car with "hacker" tags was made the subject of a test suit filed here this week by the Milestone System, Inc., who claims to be the originator of the system.

District authorities have compelled the company along with all other similar companies, to place tags with an "L" designating Livery car, on their automobiles. As a result the company alleges that its business is being ruined because customers do not like to drive an automobile, purporting to be a private car, but bearing the tell-tale hacker tag.

Locally the company is operating 80 cars, and has an investment of \$200,000 in the business. The case will be in the nature of a test case, for if the local courts rule favorably on the matter similar relief can be had in other cities, the company's attorneys declare. The same company operates systems in Baltimore, Philadelphia and Chicago.

Birmingham Sales Are Excellent During March

Dealers in All Lines Expect 1926 as Whole to Be Banner Year

BIRMINGHAM, April 5.—Business in and around Birmingham for the last 30 days has been excellent, according to reports of the automobile dealers and their brothers in the accessories and supplies businesses. The year 1925 was a banner year for the Birmingham dealers but they predict that if business this year continues as it has begun it will go far ahead of the reports for the year just closed.

Dealers in the larger and more expensive cars report a decided upward trend in the demand for their cars while the dealers handling the smaller makes report that business is steadily good and has been for several months.

In some lines of business, manufacturing and industrial endeavors, reports are to the effect that business is a little more quiet than it has been for several months, but the automobile dealers say that this does not apply to them.

Dealers in tires and accessories say that business is fine. Tire dealers are particularly optimistic, stating that they are about to overcome the temporary slump which was caused by the drastic rise in prices several months ago.

Credit conditions in this section are excellent. There are plenty of sales on used cars and few repossessions. Companies handling automobile paper state that there are practically no repossessions on new cars at this time.

Stearns Picks Lawson

CLEVELAND, April 5.—President H. J. Leonard has named O. T. Lawson factory manager of the F. B. Stearns Company of Cleveland. Just previous to his connection with the F. B. Stearns Company, Mr. Lawson was in charge of all stock, material and purchasing for the Bendix Brake Company of South Bend, Ind., as well as having charge of all plant production orders. Mr. Lawson's executive experience dates back to 1910 when he was in charge of purchasing of all material for the old Hennie Buggy Company which was a branch of the Moline Plow Company.

Lawson Gets Patent

WASHINGTON, April 5.—A patent for a commercial airplane that can carry 100 persons in the space formerly taken for 50 has been issued here to Alfred W. Lawson, president of the Lawson Aircraft Co., of New York. Mr. Lawson declares the time has come when airplane carriers can compete economically with trains. Beginning 20 years ago, Mr. Lawson has steadily been working toward an airplane that would carry passengers as cheaply as railroads and in faster time. He declares that this dream is now to become a reality.

New Orleans Business Sets Fast March Pace

Used Car Sales Also Hold Up Well—Closed Models Pre- dominate Demand

NEW ORLEANS, April 5.—"Exceptionally good" seems to be the word for the automotive business in this territory during March, with closed cars in demand especially in the larger communities and with the used car sales holding up well. On the other hand, the radio business has had the usual slowing up which comes with the approach of spring, except in the accessory end.

Some dealers report almost a record business in cars for March, with every prospect for even better business as the open spring weather approaches. The demand has been almost wholly for closed cars, until the last of the month, when in the rural communities a good demand has been registered for the open cars. Dealers report fewer used cars on hand than any time during the year with the sales good.

In the equipment field business has been slightly less than the preceding month, with a good pickup the last of the month and prospects good for fine spring trade.

As usual as summer approaches, the radio instrument business has been considerably under normal in March. March, April and May are about the worst months. Batteries and other accessories, however, are moving well. In storage batteries dealers report business much better than during the first two months of 1926.

New Studebaker Store

BOSTON, April 5.—The Studebaker Motor Sales Company, Inc., distributor of the Studebaker line for Boston and vicinity, has just opened a new branch in Cambridge near Harvard College. Mayor Edward F. Quinn, of Cambridge, was present at the opening and welcomed the sales and executive forces to Cambridge, telling them that he uses as the official city car a Studebaker which has carried him 75,000 miles.

New Retail Moon Branch

ST. LOUIS, April 5.—The new retail branch of the Moon Motor Co., Delmar and Clarendon avenues, was formerly opened as the result of the heavy demand for Moon and Diana cars within the last two months, the recent brisk business bringing the total number of these cars in St. Louis and its environs to approximately 4,500. Ralph Moberly, a veteran of the Moon organization, is in charge of the branch.

New Dodge Bros. Promotions

DETROIT, April 5.—Robert C. Graham, vice president and general sales manager of Dodge Brothers, Inc., has announced the following appointments: A. E. Nafe,

manager of service division to be head of the national business sales division, created to assist dealers in getting fleet business; H. M. Wiegand, chief inspector, made service manager; F. R. Dalpey, sales manager for Graham Brothers, to be director of commercial car and truck division; R. W. Baskett to be superintendent of district offices and district personnel. E. S. Vandelson has been made Dodge Brothers factory manager.

K. T. Keller Leaves General Motors, Ltd., for Chrysler



K. T. Keller

DETROIT, April 5.—K. T. Keller, vice-president and general manager of General Motors of Canada, Ltd., has resigned and joined the Chrysler Corporation starting April 1. He will be associated in the manufacturing end.

Louisville Dealers See Heavy Spring Business

LOUISVILLE, April 5.—While new car sales in March were below expectations, due to unseasonable weather, several dealers report sales above the same month last year and the total volume indicates that the local automobile market is in a healthy condition. Good weather in April will cause this month to set a record for new car deliveries, it is predicted.

All indications point to exceptionally good spring business in the rural sections of the state. Farmers are more prosperous than last year which should enable dealers in the smaller cities to place many new cars. This market has been below normal for some time.

Used car stocks are rather heavy and moving slowly. The effects of low prices of new cars and easy financing terms are being felt in the used car field. The majority of dealers are making strenuous efforts to keep used car stocks low. Truck business is good, tires and accessories, fair. General business is fair and showing improvement. Collections are satisfactory and repossessions low.

Demand for Cars Gains Steadily in N. Carolina

Despite Unfavorable March Weather, Used Automob- iles Move Faster

CHARLOTTE, N. C., April 5.—A distinct element of uncertainty impelling conservatism, a slowly but steadily increasing demand for motor cars, some improvements in the used car situation, a continuing satisfactory wholesale and retail trade in accessories and replacement parts and tires featured the automotive trade in the Carolina territory early in April, according to reports assembled by the leading establishments here.

Weather conditions late in March served materially to depress the demand for new cars, but there were abundant evidences of an approaching large volume of sales. The weather conditions also exerted an unfavorable influence on the trade in other automotive lines. Tire dealers forecast a great increase in the replacement demand immediately after the arrival of warm weather within a short time.

The demand for motor trucks appeared to be subsiding somewhat though a fairly satisfactory volume of sales was reported. The bus sales prospects are good, it was reported, but actual business is of unimportant volume.

Leading jobbers here said the demand for accessories and replacement parts is being slowly increased by the exercise of salesmanship. These jobbers are adding occasionally an additional line of products, and in this phase of the automotive trade, as in the others, every effort possible is being made to inspire confidence in the future.

Schrader to Expand

AKRON, April 5.—A. Schrader's Sons Co. has just awarded a contract to the Turner Construction Co., of Buffalo, for erection of a new assembling plant in Akron, to cost approximately \$300,000. It will have an estimated capacity of 150,000 tire valves or more a day. The building will be five stories high, on a foundation 52x200 feet, and will provide about 65,000 square feet of floor space. It will be adjacent to the company's present warehouse at Arlington and Johnston streets.

G. M. C. Officials to Sail

DETROIT, April 5.—O. S. Payne and Eric Nutt of the New York office of General Motors will sail April 7 for England from where Mr. Payne will ship to Africa and Mr. Nutt to Bombay, India, to establish headquarters. Mr. Payne plans to spend a year visiting the branches which the General Motors Export Corporation has established on the east coast of Africa. Mr. Nutt will reorganize General Motor offices throughout India.

"American Peril" Worries French Automobile Trade

Fear Expressed That Market Will Be Flooded If Franc Stages Come-Back

PARIS, March 25.—(By Mail)—"The American Peril" is a cry which is being heard persistently in France at the present time. While French automobile manufacturers had to meet American competition only on neutral markets, even those as close as Belgium and England, the situation was considered satisfactory, but now that American makers are seeking to secure a slice of the French home trade, distress is being displayed.

According to French Government statistics, 14,847 American passenger cars and 12 trucks and tractors were imported into France during 1925, compared with 12,832 cars in 1924 and 7,315 in 1923. These returns are obviously incorrect, for Ford registrations alone totaled 17,537 for the whole of France during the year 1925. Ford cars are imported in parts and completely assembled at a factory in the suburbs of Paris. According to state officials, a check is kept on the number of Ford cars thus imported but in what way this is done cannot be ascertained.

The total number of American makes represented on the French market is 21, as follows: Auburn, Buick, Cleveland, Chandler, Chevrolet, Chrysler, Dodge Brothers, Essex, Ford, Graham, Hupp, Hudson, Moon, Marmon, Oakland, Packard, Paige, Pierce-Arrow, Studebaker, Stutz and Willys-Overland. American tire firms selling in France are Goodrich and Firestone, while Goodrich has manufactured in France for a number of years.

During the last year American automobile registration in France represented 21 per cent of the total, the greater portion of these being Fords assembled in France. While there is a tendency, in some quarters, to hold the individual American responsible for the high value of the dollar, or the low value of the franc according to the viewpoint, the fact is recognized in more enlightened quarters that present exchange rates constitute a most effective protection for the French automobile industry.

Nominally import duties stand at 45 per cent, but all importers of American cars estimate that they have to add 64 per cent to the price of the car as invoiced to them in America, in order to put it on the French market. With the franc standing at 28 to the dollar, an active sales campaign is exceedingly difficult. Undoubtedly many American automobile representations are merely being held with the hope that the franc will improve sufficiently to allow business to be done. In other cases American cars, trucks and motor cycles left in France after the war are receiving service with parts manufactured in

France; this is being done sometimes with the knowledge of the home concerns, in other cases independently of them. Long before the franc had dropped to its present level the local representatives of American firms realized that they could manufacture parts cheaper in France than they could import them.

If the franc recovered, American automobiles would flood the French market, is the opinion very generally expressed, and it is this fear, rather than a very immediate danger which has brought forth the cry of "The American Peril." Influence is being brought on newspaper writers to emphasize the danger lying ahead of the French industry.

Charles Faroux, who occupies a leading position among French automobile journalists, represents a moderate view in stating that whenever he has been asked to test and write a description of an American automobile, he has nearly always handed it back with the remark "I do not consider your car suitable for the French public."

Faroux endeavors to explain that natural and economical conditions in the United States—crowded and level roads, low speed limits, cheap gasoline—tends towards the production of a type of car which is quite unsuited for conditions existing in France. Having proved that American cars cannot give satisfaction in the hands of the French public, Faroux makes exception of Buick, Chrysler, Willys-Knight, Cadillac and most of the General Motors products, Packard, Locomobile, Pierce-Arrow, Lincoln, and finally states that "at its price the Ford is really worthy of attention."

The French Automobile Manufacturers' Association has discussed the question of American competition, but without deciding on any action. One maker has issued a circular letter to his supply firms stating that he will not receive them if they come to his office in American cars. Others have made the same announcement in a more discreet manner. In some cases pressure is brought on dealers to prevent them handling American makes, but this is dangerous ground, for it is generally recognized that American marketing methods are superior and too great pressure on dealers may drive them into the hands of foreign firms.

Additional tariff protection is not looked for. The present 45 per cent duty, to which a more recent 12 per cent duty has to be added, constitutes a wall of practically maximum height. Realizing this, the more energetic manufacturers are endeavouring to embody into their cars the better features of American machines and in several French factories American automobiles are being compared, point for point, with the home product. The features on which advantage is given to American makes are silence, particularly when idling and at moderate engine speed, flexibility, body equipment and painting. With a few rare exceptions, French firms are not equipped for quantity body production, as Gabriel Voisin has pointed out in a book which has raised the ire of French body builders.

Fageol Will Move Sales Headquarters to Gotham

Factory Remains for Present at Kent, O.—Car & Foundry Co. Offices Also Affected

NEW YORK, April 5.—About May 1 the general sales headquarters of Fageol Motors Co. will be moved from Detroit to 30 Church street, New York City, and the offices of the American Car & Foundry Motors Co., now at 165 Broadway, will also be moved to the Church street address.

The Fageol factory at Kent, O., will be retained. It is now being used for production and later will be used for special jobs, engines and alterations. Eventually production of Fageol models will be moved to the American Car & Foundry Motors plant at Detroit. Chassis are being built there now and the plant is tooling up to produce engines.

The Hall-Scott Motor Car Co. factory will remain at Berkeley, Cal., for the time being, although it is probable that engines at least will continue to be built there.

W. L. Stancliffe, now in Detroit as general manager for American Car & Foundry Motors, will be in charge of the New York marketing headquarters. Carl Abell, from the Oakland, Cal., Fageol offices, is already here as advertising and promotion manager. F. R. Fageol is vice-president of American Car & Foundry in charge of sales policy and C. C. Castle, formerly with Castle and Hagerman, railroad equipment supplies, will be salesman at large at the New York headquarters.

Visit Gardner Dealers

PORTLAND, Ore., April 5.—Russell E. Gardner, Jr., president of the Gardner Motor Car Company of St. Louis, and W. H. Yeldell, secretary and general sales manager, were Portland visitors to visit the Oregon dealer organization and were guests of Burdett-Alvee Motor Company, state distributors. Yeldell is anticipating a 50 per cent increase in Gardner business in the Pacific Northwest for the early spring months.

Eskridge Joins Lambeth

SYRACUSE, N. Y., April 5.—B. L. Eskridge, until recently vice-president of the Syracuse Automotive Trade Association, has gone to Charlotte, N. C., to become vice-president and general manager of the Charles E. Lambeth Motor Co., Dodge Brothers dealer, succeeding Earl Hallman who resigned to become vice-president and general manager of the Lambeth Investment Corp., insurance and mortgage dealer in the automotive trade, of which Mr. Lambeth is president. Mr. Eskridge, a native of New Orleans, was formerly with the Dodge Brothers factory.

Bureau of Roads Releases U. S. Registration Totals

Compilation Shows 19,954,347
Cars Titled in 1925, or
Gain of 13.4 Per Cent

WASHINGTON, April 5.—According to the bureau of public roads of the U. S. Department of Agriculture, a grand total of 19,954,347 motor cars were registered in the United States in 1925, a gain of 13.4 per cent over the 1924 total, and comparing with 19,843,936 and 12.7 per cent as given in the 1926 statistical issue of Automotive Industries.

Other bureau figures for 1925 are:

Passenger cars, including taxicabs and buses—17,512,638.

Trucks and road tractors—2,441,709.

Taxis—145,530.

Buses—61,326.

Trailers—83,625.

Motorcycles—149,348.

State and local cars—79,529.

Official motorcycles—5,343.

The taxicab and bus figures are taken in the main from sources other than registration offices. The "state and local car" total does not include about 17,400 Federal owned cars of which data as to number in each state is not yet available.

The first eleven states in point of percentage increase in total registration over 1924 were: Florida 46.8, Mississippi 33.6, Utah 32.5, Arkansas 29.3, Alabama 23.7, North Dakota 23.5, Texas 21.6, Tennessee 19.5, Georgia 19.4, Maryland and South Dakota each 18.

Trumble Joins Stearns

CLEVELAND, April 5.—Announcement of the appointment of J. T. Trumble as chief engineer of the F. B. Stearns Company of Cleveland was made this week by President H. J. Leonard following a conference at the factory for the formulation of future production plans for the Stearns Company. Just prior to his latest connection he was assistant chief engineer of the Olds Motor Co., and was formerly associated, in engineering capacities, with the Buick Motor Car Company, Chevrolet Motor Company and General Motors Corporation.

Hubbs Speaks to Club

MILWAUKEE, April 5.—George C. Hubbs, general sales manager of Ajax Motors Co., Racine, Wis., was the guest of honor at the monthly luncheon meeting of the Milwaukee Advertising Club, and drove home some solid facts on his topic, "Reducing the Waste Line." He emphasized the fact that constancy is of the utmost importance rather than size of space, and in speaking of the selection of media, said: "Because one believes that such and such a paper is the proper medium does not make it so. Many men, old in the advertising business, are in a 'one-paper rut.' All their ads find their way to one medium. This

is narrow and in direct opposition to progress. The good advertiser forgets absolutely his prejudices and looks for the uncolored facts which determine the importance and desirability of a medium for the most productive results."

W. L. Mitchell Appointed Chrysler General Manager



W. Ledyard Mitchell

DETROIT, April 5.—Walter P. Chrysler, president and chairman of the board of the Chrysler Corporation, has announced the promotion of W. Ledyard Mitchell to vice-president and general manager of operations of the Chrysler Corporation. Mr. Mitchell assumes direction of all Chrysler operations in the three main Detroit plants, in Newcastle, Ind., and Dayton, O. Mr. Mitchell entered the automobile industry in 1917 as president of the old Maxwell Motor Car Company, with special jurisdiction over war contract production. In 1922 he became vice-president in charge of manufacturing under the present Chrysler administration.

Gardner Directors Re-Elected

ST. LOUIS, April 5.—The entire board of directors of the Gardner Motor Company, Inc., of St. Louis, was re-elected at the annual stockholders' meeting held in New York last week. Russel E. Gardner was again elected chairman of the board. Other members include R. E. Gardner, Jr., W. H. Yeldell, Fred W. Gardner, Ralph Hornblower, Oliver J. Anderson and Thomas Reyburn.

New Locomobile Dealers

BRIDGEPORT, Conn., April 5.—Locomobile Co. of America, Inc., announces the appointment of the following as dealers to handle the Junior Eight:

William A. Schmaltz, St. Joseph, Mo.; Locomobile Co. of Babylon, Babylon, L. I. N. Y.; R. K. Poetter Sales and Service, Fond DuLac, Wis.; Charles H. Roberts, Kansas City, Mo.; D. E. Meyer Company, Detroit.

U. S. to Permit Sale of Tetra-ethyl Lead Gas

Bureau Announces Regulations Regarding Methods of Selling

WASHINGTON, April 5.—The production and sale of tetra-ethyl lead gasoline is to be permitted by the U. S. Public Health Service, under new regulations, announced here this week by the department. Production was stopped last year while the health service made an investigation of the chemical.

Permits to manufacture will be granted only to manufacturers who agree to abide by the regulations of the department. Regulations to state health authorities and manufacturers were mailed this week and provide for the mixture of one part of tetra-ethyl fluid to 1300 parts of gasoline; regular physical inspection of plant employees; registration of manufacturers, and also registration of garages which accommodate more than five automobiles.

The proposed regulations for filling stations provide that it shall be placarded, to the effect that ethyl gasoline is to be used only as motor fuel, and not for cleaning or any other purpose and that pamphlets must be provided at all stations describing the possible dangers and precautions to be taken in the use of ethyl gasoline. Provisions are also made for returning the containers used in shipping tetra-ethyl lead.

"As a result of the investigations of tetra-ethyl-lead gasoline," says the announcement, "it was recommended that all such gasoline be colored distinctively, and that enough dye be added to lessen the likelihood of using the gasoline for cleaning. It was also recommended that all mixing of gasoline with the tetra-ethyl-lead fluid be done at refineries or large scale distributing stations, so as to have it done under the best conditions."

Drew Opens Showroom

BALTIMORE, April 5.—Drew Motors, Inc., Baltimore, which recently took over the Lincoln franchise, has formally opened its new quarters at 410 West North avenue. Harold Drew is president of the concern.

New Reo Home in Texas

SAN ANTONIO, Tex., April 5.—The new and modern establishment of the Reo Motor Car Company of Texas, San Antonio branch, now in course of construction at Eighth Street and Broadway, is expected to be completed and ready for occupancy not later than April 15, according to W. P. Bates, branch manager. Reo will occupy the entire building with the exception of one storeroom on the ground floor, which will be taken by L. W. Carruthers, used car Ford dealer.

Annual April Rush Is On for Boston Dealers

Property Tax Law Keeps Deliveries Held Up Until After First of Month

BOSTON, April 5.—Motor car dealers waited to welcome the passing of April 1 so they could start moving their new and used cars. Under the Massachusetts law any person who does not take possession of a car until April 2 or later does not have to pay any property tax on it. As this tax ranges anywhere from \$20 to \$40 per \$1,000 it means enough to pay for a registration tax and have something besides.

During the first half of April there will be a rush all through the state delivering thousands of cars which are being housed in the salesrooms, warehouses and such places. This will mean so much work that it will handicap some of the smaller organizations in following up prospects.

Statistics show that April has been always the peak month for Massachusetts in deliveries. After all the cars are cleaned out now under contract there will be a chance to order some more for many dealers have not stored as many as they could deliver. These newer orders will help out the factories somewhat.

Sales have not been very gratifying since the show. Salesmen report that there is a real hesitancy on the part of many to buy this year that was not noticeable in other years. It is not attributable to hard times, but more to a waiting policy to see if prices will break, for many seem to believe from production stories sent out that dealers will be overloaded this spring.

Some makes of cars are going along very well, particularly where there are strong organizations. Others have been handicapped by illness resulting from the show which left men tired so they were prey to the gripe and flu that has been prevalent. Used car sales will take a jump after April 1 for the fear of taxation will lift that ban which is felt more heavily by the used car departments.

Legion Members Advised Against Shipping Cars

INDIANAPOLIS, April 5.—In response to many queries from members of the American Legion who are planning to attend the annual convention in 1927, to be held in France, the travel committee of the Legion has requested automobile interests to inform inquiring Legionnaires that they should not take their automobiles with them on the trip. The committee sets forth that fees both on embarkation and debarkation are high, that the cars would have to be crated in most instances, and that the

French duties and taxes are extremely heavy. It is estimated that, exclusive of operating expense in France, it would cost about \$500 to transport even the lowest priced car to French soil and back. The committee declares that it would be cheaper either to rent a car abroad or to buy a French car, which could be purchased at a very low rate owing to the favorable exchange. A ready resale would be found when the veteran decides to return, the committee says.

Look Over Your Sales Force for This Youth



John Sinclair Meck

CHICAGO, April 5.—Reward of \$200 is offered for the apprehension of John Sinclair Meck, 18 years old, who disappeared from Northwestern University, Evanston, Ill., November 30, 1925. He is 5 ft. 8 in. tall, weighs 130 pounds, is of slender build, stands and walks erect has brown-black hair, gray-blue eyes and is of medium fair complexion. He is naturally left-handed, but uses both hands. He was a student in the school of engineering and his hobby is radio. He has been employed as a radio trouble shooter. He is an expert automobile driver and is ambitious to sell cars. The photo shows him with glasses, which he had not worn for some time and may or may not be wearing now. If he is found, do not tell him, but notify his father, S. R. Meck, 810 Vernon Avenue, Glencoe, Ill., the district division police department, Chicago, or the Chicago Automobile Trade Association.

N. S. P. A. Show Announced

DETROIT, April 5.—An invitation has been extended to overseas distributors of motor vehicles, replacement parts and accessories by the National Standard Parts Association to visit the annual convention and exhibit to be held November 15 to 19 at Chicago, in the Sherman Exhibition Hall. The exhibition this year will consist of all standard makes of motor vehicle parts, shop equipment and tools.

Moon Reports Earnings For Six-Year Period

Company Shows Total Production of 52,050 for Time of Greatest Prosperity

ST. LOUIS, April 5.—This is the twentieth anniversary of the Moon Motor Car Company and Stanley Moon, secretary of the company, points out that it has been in the last six years that the progress of the company has been so extraordinary.

During this period of six years the total sales have been over \$52,266,350.37. Total cars produced 52,050 of which 10,675 were exported. The total earnings of the company for these six years have been \$4,402,008.69, or a profit ratio of 8.85 per cent for the entire period.

The company has paid out dividends in cash amounting to \$1,819,469.44, having sufficient earnings left to place \$2,582,539.25 in surplus.

The business of the Moon Motor Car Company increased 36 per cent in 1925 over the previous year. It will be recalled in 1925 the Diana car was produced and it is due to the production of this new eight cylinder model that this gain is largely attributable. Stanley Moon states that the bookings on hand for shipments during the months of April, May and June indicate the second quarter of this year will be the heaviest production and sales period ever experienced by the company.

Texas Chevrolet Dealers Hold Big Sales Congress

DALLAS, Tex., April 5.—Discussions of how to find customers, the best line of arguments to use in making approaches and in closing sales, how to keep cars sold, the appraisal of cars offered for trade on new cars and the best line of advertising, featured the annual sales congress of the Chevrolet dealers of Texas here this week. Some 500 dealers from all sections of the state attended the congress.

The chief address was made by R. H. Grant, vice-president and sales manager of the company. Other headquarters officials making addresses were C. E. Dawson, assistant sales manager, R. K. White, general sales promotion manager, William Brees, purchase certificate manager, E. W. Fuhr, regional manager, W. G. Lewellen of the engineering department, W. G. Holler, sales service department, John E. Grimm, advertising manager, and J. P. Little of the parts and service department.

Reports from the company offices where the concern is running overtime to meet demands for cars, but will continue to keep deliveries up to the standard. The reports of the dealers from all sections of the state were to the effect the Chevrolet sales in Texas this year will be 25 per cent greater than for 1925.

New York Sales Gain in Spite of Frosty Spring

Used Car Market Also Improves Through Seasonal Demand

NEW YORK, April 5. — Although further stock market declines, prevalence of considerable hand-to-mouth buying and reports of less favorable conditions in some of the major trades might be regarded as signs unfavorable to the automotive industry, car sales in the Metropolitan territory do not bear out this theory, and there are plenty of automobile leaders, in both car and accessory fields, who are not at all pessimistic as to the immediate future or even as to the last six months of this year.

Despite the fact that spring here as elsewhere is somewhat backward, 4182 new cars were sold in the Metropolitan territory during the first two weeks in March, a gain of 818 or 25 per cent over the total for all of February and a gain of 266 or nearly 7 per cent over the first two weeks of March last year.

From Jan. 1 to March 13 this year 14,319 new cars were sold against 10,577 in the 1925 period, an increase of 3,742 or 35 per cent.

In March, 1925, total sales were 10,319. With 4,182 sold during the first half of March this year this leaves 6,137 to be sold during the last half to attain the March, 1925, total. That total will probably be exceeded, since the third and fourth weeks of March this year were running much stronger than the first and second weeks, which in turn were higher than the corresponding weeks of March last year.

Seasonal demand has improved the used car market and betterment in the tire sales field is also reported, with some seasonal falling off in radio sales.

Many New Willys Dealers

DETROIT, April 5.—Forty-one new dealers have been signed by Willys-Overland, Inc., throughout Michigan in the last six weeks, George E. Clarke, branch manager in Detroit has announced. The Pennow Motor Sales, 6520 Michigan avenue is the latest dealer to be signed in Detroit. One of the most important out-of-town dealers is the Overland-Knight Company of Ann Arbor. Grover Koch is president and Ralph J. Yeisley vice-president.

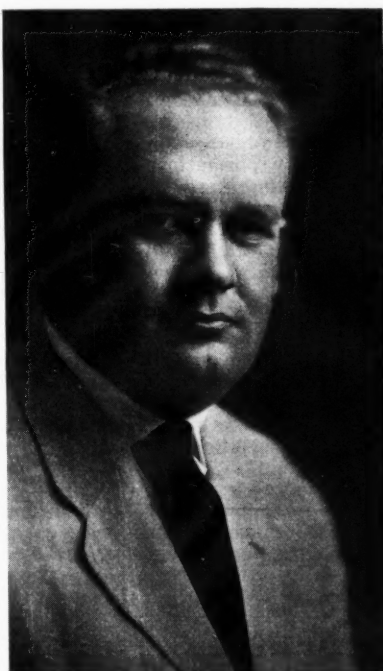
Partnership Is Dissolved

CHARLOTTE, S. C., April 5.—The partnership of J. D. Woodside and M. W. Woodside, owners of Woodside Motor Company, dealer in Franklin cars for many years, was dissolved, and J. D. Woodside will continue to operate that business under the same firm name. M. W. Woodside will engage in the operation of a service station, located within two blocks of the center of this city.

Willys Branch Expanded

DETROIT, April 5.—Willys-Overland, Inc., has completely revamped its direct factory branch at 444 Willis avenue, Detroit. The revamping will enable the branch to increase its service output from 1,600 to 2,000 jobs each month. A quick service department where jobs taking two hours or less are assigned and a motor exhaust conveyor which carries all exhaust fumes outside the building are two of the new features introduced.

Campbell Heads Stutz Development Division



C. Alfred Campbell

INDIANAPOLIS, April 5.—E. S. Gorrell, vice-president of the Stutz Motor Car Company of America, Inc., announces an addition to the sales department of his fast growing organization with the appointment of C. Alfred Campbell as sales development manager. Mr. Campbell is a territorial analyst and Douglas Andrews will have charge of sales department activities up to and including signing of dealers and distributors. Mr. Campbell will have charge of sales from that point on.

Takes Star Distribution

MINNEAPOLIS, April 5.—The Potts Motor Co., a veteran sales agency handling Ford Motor Co. products, has changed to the Star line, selling products in Hennepin county and acting as wholesale agency for Star parts in Minnesota, the Dakotas and western Wisconsin. The company does a business of \$750,000 and will have \$25,000 in parts in its depot. Headquarters are 1017 Fourth Avenue S and 1015 Sixth Avenue S.

M. & A.M.A. Expects Good Second Quarter Business

Parts and Accessory Buying Forecast as Heavy as in 1925

NEW YORK, April 5.—Continuance of good business throughout the second quarter of 1926 is expected by members of the Motor & Accessory Manufacturers' Association despite some tendencies towards pessimism as to general business conditions prevailing in other quarters.

Second quarter deliveries in parts and accessories fields are expected to show substantial buying, and there is every indication now that the year as a whole will compare favorably with 1925.

The first quarter's business was at a much higher level than the same quarter last year. Although a second quarter gain over the first like that of a year ago is not generally foreseen, only a few members look for any sharp curtailment in the next three months. The general opinion is that present rapid production of cars and other automotive products will decline gradually, giving a total business for the year about equal to or slightly better than 1925.

A few members fear that car production in recent months ran ahead of demand, making drastic curtailment necessary soon. Some feel that over-stocking of dealers will affect parts, accessory and service equipment business adversely. On the other hand, other members believe that some curtailment by car manufacturers of shipping orders for late March and April should be regarded as a good sign that production is being held in line with demand and that protection of dealers against over-stocking will be as thorough as it was last year.

Graham Shipments Gain

DETROIT, April 5.—Graham Brothers trucks and motor coach deliveries continue to increase each week. During the week ending March 20, 580 trucks and motor coaches were delivered in the United States. This is approximately 72 per cent better than the corresponding week for 1925. The deliveries for the trucks and motor coaches since January 2 and including March 20, 1926, totaling 4817 compares to 2567 for the same period in 1925, a gain of 2250 or 88 per cent.

Gallipolis, O., Has Show

GALLIPOLIS, O., April 5.—The first automobile show held in Gallipolis, closed its doors recently following a most successful exhibition of about 20 makes of passenger cars. The show was held in the Silver Slipper Community Hall. In all 12 local dealers participated showing not only cars but a full line of accessories.

TRADE ASSOCIATION ACTIVITIES

TIRE DEALERS ORGANIZE

John Newsom Elected First President of Birmingham Group

BIRMINGHAM, April 5.—Tire dealers of Birmingham have just completed the organization of the Tire Dealers' Association of this city for purposes of co-operation in the dissemination of credit information and to promote a better feeling among the men who are engaged in the business of selling tires.

John Newsom of the Watts-Newsom Tire Company has been elected president, Alex McElroy of the Gafford Tire Company has been elected vice president, and Hunter Watkins of the 81 Tire Company has been elected secretary of the association.

Already the membership is 100 per cent among the tire dealers operating in the city of Birmingham, and the committees are now at work making every effort to have all suburban dealers and dealers in surrounding towns come into the organization. The organization is expected to prove particularly advantageous to the small dealer in tires, whose chief handicap in doing business is the danger of bad credits.

An interesting feature of the association is the fact that every effort is being made to make it easy for the small dealer to participate in the benefits of the association. The dues paid in are governed by the volume of business done by the company during the year before. There are three classes and three different amounts of dues payable.

All members share alike in the benefits of the association, the man in the first class being entitled to just as much credit service and information as the man in the third class. The association is incorporated and every member who joins is a director in the corporation.

Kalamazoo Elects Parfet

KALAMAZOO, April 5.—Ray T. Parfet of the Ray T. Parfet Company was elected president of the Kalamazoo Automobile Trade Association at its annual meeting. He succeeds D. B. Hunt of the Thos. M. Orrell Company. Other officers elected were H. J. Bauman, Bauman Motor Sales, vice-president, and Clarence L. Miller secretary and treasurer. Mr. Miller succeeds Otis H. Boylan who has held the office for the last five years. The new officers had charge of the regional meeting of the Michigan Automotive Trade Association for southeastern Michigan, which was held at the Park American hotel. William B. Burrus, sales consultant for the N. A. D. A. was the principal speaker.

Galesburg Hears Bullock

GALESBURG, Ill., April 5.—Members of the Galesburg Automobile Dealers' Association were addressed by H. D. Bullock of Los Angeles, at the regular meeting here. He represents the National Automobile Dealers' Association and is a sales specialist. In his talk, he outlined some new ideas in relation to salesmanship and how to handle prospects to the best advantage. The Galesburg dealers abandoned their regular meetings last fall but it was felt by the leading firms that this was a mistake. It is now planned to revive the interest and

assemble twice a month during the remainder of the year, securing as many national speakers as possible.

Engine Heat Discussed

SAN FRANCISCO, April 5.—The San Francisco Chapter of the Society of Automotive Engineers heard an interesting plea for the standardization of automobile engine temperatures by the manufacturers from W. S. James, assistant technologist of the Associated Oil Company and representative of the Northern California Section on the sections committee of the S. A. E. Dr. James delivered the address of the evening at the monthly meeting of the San Francisco Chapter.

After discussing a number of experiments conducted by himself and others, Dr. James said, in part:

"The temperature in the intake manifold necessary to successful vaporization is possibly 150 degrees. There is a remarkable standardization of gasolines, so that their vaporization takes place at about the same temperature, uniformly and consistently, but the greatest impediment to satisfactory operation today is the lack of unification, i. e., standardization, of engine temperatures.

"If, for example, all the engines ran best at 175 to 180 degrees, and were so built that such a temperature could be maintained, we would have little of the dilution which now annoys us. But it is certain that the manufacturers of gasoline cannot make one kind of gas which will fit a dozen kinds of engines, operating at maximum efficiency at a dozen different temperatures. If engines could be so standardized as to temperatures, the producers could make one gasoline which would be the best for all engines.

"We must always think of the actual performance of gas in an engine in terms of continuous distillation. Few gasolines are now cut straight from crude oil, because few crudes have enough starting factors, and must have casing-head gas introduced for starting. Blending also presents new problems to the producer, but present methods of distillation enable one to compute the blends with great exactness."

Celebrate Show Success

FORT WAYNE, Ind., April 5.—Celebrating success of the first Fort Wayne radio show the Fort Wayne Radio Trade Association held a dinner and party at the Elks temple. C. H. Lines, radio and automobile distributor, presided as toastmaster. Plans were discussed for a second show to be held in the fall at the outset of the new radio season. Robert M. Snyder, secretary of the Better Business Bureau, was the principle speaker, talking on "Radio Advertising." Herbert Wall, president of the association, Ralph Roussey, Robert Burns and Bert J. Duesler arranged the affair.

Hartford Re-elects Campbell

HARTFORD, Conn., April 5.—Maj. Thomas W. Campbell has been re-elected president of the Hartford Automobile Dealers' Association, Arthur A. Nielsen, vice-president, Dwight A. Burnham, treasurer and Arthur Fifoot, secretary. Fred T. Reid and Maj. H. H. Skerrett, Jr., have been added to the board of directors.

TEXAS DEALERS TO CONVENE

Tenth Annual Conclave Planned for May 12 and 13

DALLAS, Tex., April 5.—Plans are now being made for the tenth annual convention of the Texas Automotive Dealers' Association which will be held at Galveston on May 12 and 13 according to notices received by dealers and jobbers here from Captain W. A. Williamson, vice-president and manager of the organization.

With the problems of the automotive dealers more numerous than ever before it is expected the attendance at the Galveston convention will be the biggest in the history of the organization.

While the program has not been completed it is certain the association will discuss state and national tax laws, highway laws, gas tax laws, tonnage tax laws and any and everything which goes into making automobiles more expensive to own and operate.

It is also certain the dealers will discuss the used car problem with a view of standardizing valuations, if such thing is possible, and of local associations keeping closer in touch with their membership and the state organization. Reduction in new cars prices and extension of time for paying for those cars has increased used car stocks until "second-hand" cars are nightmares to dealers as well as "floor space killers and ledger unbalancers."

Parts Men Re-Elect Bigler

LOS ANGELES, April 5.—Lee Bigler, president of the A. & A. Parts Corporation, of Santa Monica, has been re-elected president of the Parts Distributors' Association of Southern California. Membership in this association is confined to service stock dealers in the smaller towns and communities. H. M. Miller, of the Miller Parts Store, of Anaheim, was elected vice-president and William Penn, of the Orange County Ignition Works was elected secretary.

Decatur Dealers Organize

DECATUR, Ill., April 5.—The Decatur Automobile Dealers' Association has been revived, and it is now proposed to hold weekly meetings. Lack of any specific reason for assembling led to the abandonment of the periodical gatherings, but recently, a number of the leading firms thought it advisable to reassemble. There are 20 firms distributing cars here and there are many subjects affecting the business, which could be profitably discussed. It is planned at the next meeting to elect officers and take steps to see that every dealer attends the meetings or else arranges for some representative of his firm to be present.

Headlights Discussed

BOSTON, April 5.—"Headlights—Their Use and Misuse" was the subject of a talk delivered by Alfred W. Devine, of the Massachusetts Motor Vehicle Department at the Spring meeting of the Illuminating Engineering Society section here at the Engineer's Club. Mr. Devine with a series of charts and lantern slides explained various phases of illumination and glare.

Buying "Peak" About 3 Weeks Behind in Detroit

Bad Weather Is Principal Factor in Delay—April Expected Good

DETROIT, April 5.—March, an unusually good month considered as a whole in the automotive industry, had its luster somewhat dimmed by two factors; one was the weather and the other was the downward trend of the price of motor stocks. The latter had its effect in helping to circulate unreliable rumors about the industry.

It was believed at the factories that the bad weather prevailing in many of the northern and northeastern states during the first week and a half of the month would break, causing the opening of the spring buying. Such was not the case and many companies were forced to revise their production schedules when the cold spell failed to break. Again, they increased them when it seemed likely, that spring had finally arrived.

Taking the entire state of Michigan as an example, it can be said that the spring buying season at present is approximately three weeks behind. Bonafide orders which have been on dealers' books for two months will not be filled until the prospective owners are certain that the weather had changed sufficiently. It is further believed that when spring does arrive, that the buying will be the greatest that the industry has known for some time.

The downward trend in the price of stocks has not had any apparent effect on production or sales.

Used car stocks are lower than they were for the corresponding period a year ago and reports which are coming into the factories show that they are slowly on the decline. Using this as a basis, it can be seen that the sale of new cars will rise in proportion.

The general outlook for April is good, the general wholesome business condition of the country presaging an equally good amount of automobile purchases. Several companies have announced their intention of increasing their daily production by 200 cars during the month.

Jackson, O., Holds Show

JACKSON, O., April 5.—The third annual automobile show, given by dealers and distributors of Jackson, in the Scott Building, was a splendid success in every way. Thousands of people visited the exhibition and sales were more numerous than at any previous show. Between 50 and 60 models were on display, comprising the leading makes.

Buick Deliveries Gain

NEW YORK, April 5.—From January 1 to March 20 the New York branch of the Buick Motor Co. received 1,968 orders and made 1,289 deliveries to retail buy-

Coming Motor Events

Automobile Shows

1927 NATIONAL SHOWS	
New York.....	Jan. 8-15
Chicago.....	Jan. 29-Feb. 5
Denver, Colo.....	Aug. 3-6
Chicago.....	Nov. 15-19
(Annual show and convention of National Standard Parts Association.)	

Conventions	
Texas Automotive Dealers' Association, Tenth annual, Galvez Hotel, Galveston, Tex., May 12-13.	
Automobile Body Builders' Association, annual, Hotel Statler, Detroit, June 8-10.	

COMING FEATURES OF CHILTON
May 6—Moroz Ags.—Sales and Service Reference Number.

Races

Fresno, Cal.....	April 15, 1926
Atlantic City, N. J.....	May 1, 1926
Charlotte, N. C.....	May 10, 1926
Indianapolis, Ind.....	May 31, 1926
Altoona, Pennsylvania.....	June 12, 1926
Laurel, Maryland.....	June 24, 1926
Salem, New Hampshire.....	July 5, 1926
Atlantic City, N. J.....	July 17, 1926
Altoona, Pennsylvania.....	Sept. 6, 1926
Salem, New Hampshire.....	Sept. 25, 1926
Laurel, Maryland.....	Oct. 3, 1926
Atlantic City, N. J.....	Oct. 27, 1926
Charlotte, N. C.....	Nov. 11, 1926
Los Angeles, Cal.....	Nov. 25, 1926

CLASS JOURNAL PUBLICATIONS

May—Automobile Trade Journal—"Biggest Market" Issue.

ers, against 1,278 orders and 983 deliveries in the 1925 period, a gain in orders of 54 per cent and in deliveries of 31 per cent. Orders during the first 20 days of March were 788 against 505 last year, a gain of 56 per cent, and deliveries increased 39 per cent, from 515 to 719. A. G. Southworth, branch manager, states that orders indicate unusually heavy April deliveries, with dealers' stocks normal and well balanced care for orders on all models.

Enter New Showroom

PORTLAND, Ore., April 5.—Cook & Lyon Company, state distributor for Paige and Jewett lines in Oregon, is now occupying its new two-story semi-fire-proof structure at 16th and Washington Streets. The new two-story building is 100x125 feet in size and the firm now has upwards of 30,000 feet of floor space. A feature of the retail showroom is the absence of posts. No expense was spared by Fred A. Cook and Harry Lyon, partners, in making this one of the most striking salesrooms along the coast.

Denver Trade Increases Slightly Over February

DENVER, April 5.—Business conditions in the motor trade in Colorado for March showed a slight increase over February, but were considerably behind the same month a year ago. The explanation offered is two-fold. In the first place tax payments in Colorado and assessment time as well had been moved from March 1 to April 1. Automobiles bought after April 1 will not be taxed for 1926, and many prospective buyers were taking this into account.

Tax paying time always slows up car purchases, and this year it fell in March. The second reason is obvious. Many distributors and agencies did not make the 2 per cent sales tax reduction effective

tive till the end of this month, and buyers were awaiting the reduction.

The various sections of the state maintained the same relative volume, with the possible exception of the Horn, including Greeley, Boulder, Longmont, Loveland and Fort Collins. This district, often the most prosperous in the state, is rapidly recovering from last year's drouth, and is overtaking the other sections in prosperity. Ample rains and snows evenly distributed have assured crops in all irrigated districts and have made excellent prospects for the dry farmers. Excessive sales are predicted for April.

Visit Overland Dealers

PORTLAND, Ore., April 5.—Southwest Washington dealers in Overland Willys-Knight motor cars were paid a visit last week by J. H. Alfred, northwest manager of Willys-Overland Pacific Company, accompanied by G. F. Koehler, wholesale manager of the Seattle branch and Hal S. Nelson, sales promotion manager for the Northwest territory. Tacoma, Olympia, Elma, Montesano, Aberdeen, Centralia and Chehalis were the towns visited.

Pierce Service Men Meet

SAN FRANCISCO, April 5.—More than 150 Pierce-Arrow service men from all parts of the Pacific coast, Nevada, and Arizona, attended the three-day service convention of the Pierce-Arrow Motor Car Company in San Francisco. Myron E. Forbes, president of the corporation, made a special trip to the coast to attend this meeting, which was in charge of Fred J. Wells, service manager at the Pierce-Arrow factory. Axel Thellman and B. E. Torkelson, assistants to Wells, also were in attendance. The Delco factory sent C. S. Schneider, mechanical engineer, and the Willard Storge Battery Company sent F. A. Byrnes from the engineering department.

Prices and Weights of Current Passenger Car Models

SHIP.
WT. PASS. BODY STYLE. PRICE

AJAX

108 in. W. B.		
2210	5-p	Touring \$865
2410	5-p	Sedan 995

APPERSON "6"

3100	5-p	Phaeton \$1,575
3130	5-p	Sp. Phaeton 1,650
3145	4-p	Coupe 2,050
3570	5-p	Sp. Sedan 2,100

"ST. 8"

3520	5-p	Sp. Phaeton \$1,995
3750	4-p	Coupe 2,450
3790	5-p	Sedan 2,595

AUBURN "4-44"

.....	5-p	Touring \$1,145
.....	5-p	Roadster 1,145
.....	5-p	Coupe 1,175
.....	5-p	Sedan 1,195

"6-66"

2850	4-p	Sport-Roadster 1,395
2860	6-p	Touring 1,395
.....	3-p	Coupe 1,445
3020	5-p	Brougham 1,495
3070	5-p	Sedan 1,695
3070	.....	Wanderer 1,745

"8-88"

3180	4-p	Sport-Roadster 1,695
3200	6-p	Touring 1,695
.....	3-p	Coupe 1,745
3380	5-p	Brougham 1,795
3450	5-p	Sedan 1,995
3450	.....	Wanderer 2,045
3750	7-p	Sedan 2,095

BUICK "Standard"

2845	2-p	Roadster \$1,125
2955	5-p	Touring 1,150
3020	2-p	Coupe 1,195
3150	5-p	2 d. Sedan 1,195
3110	4-p	Coupe 1,275
3230	5-p	4 d. Sedan 1,295

"Master"

(120 in. W. B.)		
3350	2-p	Roadster 1,250
3515	5-p	Touring 1,295
3670	5-p	2 d. Sedan 1,395
3765	5-p	Sedan 1,495

(128 in. W. B.)

3570	4-p	Sp. Roadster 1,495
3635	5-p	Sp. Touring 1,525
3805	3-p	Country Club 1,765
3855	4-p	Coupe 1,795
3940	5-p	Brough. Sedan 1,925
4025	7-p	Sedan 1,995

CADILLAC

"314" Standard Line

(132 in. W. B.)		
4040	2-p	Coupe \$3,045
4210	5-p	Sedan 3,195
4315	7-p	Sedan 3,295
4110	5-p	Brougham 2,995
4380	7-p	Imperial 3,435
4125	4-p	Victoria 3,095

Custom Built

(132 in.)		
4065	3-p	Roadster 3,250
(138 in. W. B.)		
4125	7-p	Touring 3,250
4100	5-p	Phaeton 3,250
4300	5-p	Coupe 4,000
4300	5-p	Sedan 4,150
4400	7-p	Suburban 4,285
4450	7-p	Imperial 4,485

CASE

J. I. C.

3260	3-p	Roadster \$1,840
3290	5-p	Touring 1,885
3470	5-p	Sp. Touring 2,160
3640	5-p	Sedan 2,590
3650	5-p	Brougham 2,590

"Y"

3950	7-p	Touring 2,225
4320	7-p	Sedan 2,975

CHANDLER "35"

3090	2-p	Roadster \$1,695
3085	5-p	Sport Touring 1,545
3223	7-p	Touring 1,645
3309	5-p	Brougham 1,695
3525	5-p	Met. Sedan 1,895
3498	5-p	20th C'y Sedan 1,590
3594	7-p	Sedan 1,995

CHEVROLET

"Superior" (Series K)

1780	2-p	Roadster \$510
1875	5-p	Touring 510
2030	2-p	Utility Coupe 645
2130	5-p	Coach 645
2215	5-p	Sedan 735
.....	5-p	Landau Sedan 765

CHRYSLER "58"

(109 in. W. B.)

2265	2-p	Roadster \$390
2300	5-p	Touring 845
2405	2-p	Club Coupe 895
2510	5-p	Coach 935
2570	5-p	Std. Sedan 995

SHIP.
WT. PASS. BODY STYLE. PRICE

CHRYSLER (Continued)

"70" (119 3/4 in. W. B.)

2805	4-p	Roadster \$1,625
2785	5-p	Phaeton 1,395
2895	5-p	Coach 1,445
2935	4-p	Royal Coupe 1,795
2995	5-p	Brougham 1,695
3050	5-p	Sedan 1,995
3085	5-p	Royal Sedan 1,995
3090	5-p	Crown Sedan 2,095

"80"

(120 in. W. B.)		
3730	4-p	Roadster 2,885
3775	5-p	Phaeton 2,645
4105	5-p	Sedan 3,395

(127 in. W. B.)

4015	4-p	Coupe 3,195
4225	7-p	Sedan 3,595
4260	7-p	Sedan Lim. 3,695

CLEVELAND "31"

2415	5-p	Touring \$945
2565	5-p	Tour'g DeLuxe 1,025
2520	3-p	Coupe 1,035
2695	5-p	Sedan 1,090

"43"

2800	5-p	Touring 1,145
2915	3-p	Coupe 1,225
2975	5-p	Sp. Touring 1,295
3145	5-p	Sedan 1,345
3215	5-p	Sedan DeLuxe 1,595
3215	5-p	Sport Sedan 1,625

CUNNINGHAM

"V-6"

4600	7-p	Touring \$6,650
4500	4-p	Sp. Touring 6,150
4700	4-p	Coupe 7,600
5000	6-p	Limousine 8,100

DAGMAR

"6-70"

3750	4-p	Roadster \$3,500
3800	4-p	Sp. Tourer 3,500
3700	4-p	Phaeton 3,500
4200	4-p	Petite Coupe 4,500
4200	5-p	Petite Sedan 4,500
4500	4-p	De Luxe Coupe 4,750
4700	5-p	Sedan 4,700
4800	7-p	Sedan 4,750

"6-60"

3100	2-p	Roadster 1,985
3200	4-p	Sp. Touring 1,985
3150	5-p	Touring 1,785
3500	5-p	Sedan 2,445

DAVIS

"92"

2660	4-p	Roadster \$1,495
2915	5-p	Legion. Tour. 1,495
3000	5-p	Sedan 1,595
3060	5-p	Imperial Sedan 1,795

"93"

2325	5-p	Touring \$1,285
2500	5-p	Sedan 1,285
2450	3-p	Coupe 1,285

DIANA "St. 8"

2995	5-p	Roadster \$1,795
3275	5-p	De Luxe Sedan 2,195
3160	5-p	Cabriolet 2,095
3170	5-p	Sedan De Luxe 1,995
3640	7-p	Sedan (135 in. W. B.) 2,695
.....	7-p	Berline Sedan 2,895

DODGE BROTHERS

2448	2-p	Roadster \$ 795
2538	2-p	Special Roadster 845
2567	5-p	Touring 795
2642	5-p	Spec. Touring 845
2589	2-p	Coupe "B" 845
2703	2-p	Spec. Coupe "B" 895
2811	5-p	"B" Sedan 895
2943	5-p	Spec. "B" Sed. 945
2920	5-p	DeL. "A" Sed. 1,075

DUESENBERG

Straight "8"

3920	2-p	Roadster ↑
3970	4-p	Roadster ↑
3700	5-p	Phaeton \$6,650
3980	4-p	Sp. Phaeton ↑
4115	5-p	Sedan ↑
4500	7-p	Sedan ↑

†Manufacturers do not quote list prices.

DU PONT

"D"

3300	2-p	Roadster \$2,600
3500	5-p	Touring 2,600
3550	5-p	Touring Sedan 3,400

DURANT

A-22

2300	5-p	Touring \$ 730
2380	5-p	Spec. Touring 805
2450	4-p	Coupe 825
2480	4-p	Spec. Coupe 875
2650	5-p	Sedan 880
2710	5-p	Spec. Sedan 995

SHIP.

SHIP.
WT. PASS. BODY STYLE. PRICE

ELCAR

"4-55"		
2560	5-p	Touring \$1,095
.....	4-p	Roadster 1,295
2900	5-p	Coach 1,195
.....	3-p	Coupe 1,295
2779	5-p	Sedan 1,395

"6-65"

.....	5-p	Touring 1,295
.....	4-p	Roadster 1,495
2779	5-p	Coach 1,395
.....	3-p	Coupe 1,495
2900	5-p	Sedan 1,595

"8-81"

.....	4-p	Roadster 2,315
.....	7-p	Touring 2,265
3000	3-p	Coupe Road 2,195
.....	4-p	Coupe 2,095
.....	5-p	Sedan 2,265
4050	7-p	Sedan 2,765

ESSEX

2185	5-p	Touring 789*
2395	5-p	Coach 789*

*Delivered, Detroit. Mfrs. do not quote F. O. B. prices.

FLINT

"E-80"

3325	4-p	Sport Road. \$1,945
3245	5-p	Touring 1,595
3310	4-p	Sp. Touring 1,945
3245	4-p	Coupe 2,045
3595	5-p	Sedan 2,195
.....	7-p	Sedan 2,395

"B-60"

.....	4-p	Roadster 1,395
2715	5-p	Touring 1,285
.....	4-p	Coupe Roadster 1,495
2940	5-p	Sedan 4d. 1,525
2965	5-p	Brougham 1,575

"Z-18"

.....	5-p	Coach 1,085
.....	5-p	DeL. Coach 1,185

FORD

Without Starter and Dem. Rims

1526	2-p	Runabout \$290
1557	.....	With Balloon Tires 335
1607	5-p	Touring 310
1640	.....	With Balloon Tires 355

With Starter and Dem. Rims

1645	2-p	Runabout 375
1655	.....	With Balloon Tires 400
1728	5-p	Touring 395
1738	.....	With Balloon Tires 420
1851	2-p	Coupe 500
1860	.....	With Balloon Tires 525
1961	5-p	Sedan, Tudor 545
1972	.....	With Balloon Tires 545
1994	5-p	Sedan, Fordor 565
2004	.....	With Balloon Tires 590

FRANKLIN

"11"		
2800	3-p	Sport Road. \$2,750
2845	5-p	Touring 2,635
2965	3-p	Coupe 2,700
3175	5-p	Sedan 3,090
2900	2-p	Sp. Coupe 3,150
3080	5-p	Sport Sedan 3,225
3275	7-p	Limousine 3,275
3135	7-p	Cabriolet 4,400
.....	5-p	Oxford Sedan 3,172

GARDNER

3150	5-p	Touring \$1,395
3160	4-p	Sp. Roadster 1,395
3440	5-p	Brougham 1,545
3440	5-p	Std. Sedan 1,595

"8-A"

3520	5-p	Touring 1,795
3480	4-p	Sp. Roadster 1,795
3740	5-p	Brougham 1,895
3580	4-p	Cabriolet 2,095
3730	5-p	Imp. Sedan 2,095
.....	7-p	Sedan 2,795

GRAY

Prices and Weights of Current Passenger Car Models

SHIP. WT. PASS. BODY STYLE. PRICE

McFARLAN "6" (Continued)

3850	4-p	Coupe	\$3,180
3850	5-p	Sedan	3,180
3850	5-p	Spec. Sedan	3,180
3850	5-p	Sub. Sedan	3,380
3850	5-p	Sub. Sedan	3,480
3850	5-p	Brougham 4d.	3,180

"TV"

4000	2-p	Roadster	\$5,400
4600	4-p	Sp. Touring	5,600
4900	4-p	Coupe	6,720
5200	4-p	Tour. Sedan	6,720
5200	7-p	Tour. Sedan	6,810
5200	6-p	Sedan	6,720
5200	7-p	Sedan	6,810
5200	7-p	Spec. Sedan	6,810
5200	7-p	Enc. Sedan	7,110
5200	7-p	Sub. Sedan	7,110
5200	7-p	Town Car	9,000

"Straight 8"

2-p	Roadster	\$2,650
4-p	Roadster	2,900
5-p	Touring	2,650
7-p	Touring	2,750
5-p	Sedan	3,180
5-p	Sub. Sedan	3,380
7-p	Sedan	3,280
7-p	Sub. Sedan	3,480
4-p	Coupe	3,180
5-p	Coach Broug.	3,180
5-p	Town Car	4,600

MARMON

"74"

3695	2-p	Speedster	\$3,295
3604	5-p	Phaeton	3,295
3704	7-p	Touring	3,295
4080	5-p	Std. Brougham	3,295
3937	4-p	Victoria	3,295
3983	2-p	Std. Coupe	3,295
4065	5-p	Sedan	3,295
4243	7-p	Spec. Brougham	3,395
4080	5-p	Spec. Sedan	3,395
4243	7-p	Spec. Sedan	3,470
4031	5-p	Sedan De Luxe	3,775
4175	7-p	Sedan De Luxe	3,850
4100	5-p	Sedan Lim.	3,900
4215	7-p	Sedan Lim.	3,975

MOON

Series "A"

2600	5-p	Roadster	\$1,395
2720	5-p	Cab. Roadster	1,545
2600	5-p	Touring	1,195
2710	5-p	Coach	1,295
2710	5-p	Del. Sedan 2d.	1,495
2850	5-p	Std. Sedan 4d.	1,445
2860	5-p	Del. Sedan 4d.	1,595

London

3270	5-p	Sp. Touring	\$1,985
3290	7-p	Touring	1,985
3590	5-p	Petite Sedan	2,540

NASH

"Special"

2870	2-p	Roadster	\$1,115
2960	5-p	Touring	1,135
3030	2-p	Business Coupe	1,165
3120	5-p	Sedan 2d.	1,215
3170	5-p	Sedan	1,315
3270	5-p	Sedan 4d.	1,445

"Advanced"

(121 in. W. B.)

3390	4-p	Roadster	1,475
3400	5-p	Touring	1,340
3550	5-p	Sedan 2d.	1,425

"Advanced"

(127 in. W. B.)

3480	7-p	Touring	\$1,490
3640	4-p	Victoria	1,790
3750	5-p	Coupe 4d.	1,990
3830	7-p	Sedan	2,090

OAKLAND

"6"

2425	2-p	Roadster	\$975
2500	5-p	Touring	1,025
2600	4-p	Sp. Roadster	1,175
2640	5-p	Coach	1,095
2615	3-p	Landau Coupe	1,125
2765	5-p	Sedan	1,195
2885	5-p	Landau Sedan	1,295

OLDSMOBILE

"30"

2235	5-p	Touring	\$875
2445	4-p	Del. Roadster	975
2445	5-p	Del. Touring	980
2460	2-p	Coupe	925
2460	5-p	Coach	950
2660	2-p	De Luxe Coupe	990
2835	5-p	De Luxe Coach	1,040
2735	5-p	Sedan	1,025
2735	5-p	De Luxe Sedan	1,115

OVERLAND

"91" 4

(100 in. W. B.)

1919	5-p	Touring	\$495
2205	5-p	Sedan De Luxe	695
2202	5-p	Std. Sedan 2d.	595

SHIP. WT. PASS. BODY STYLE. PRICE

OVERLAND (Continued)

2395	5-p	Touring	895
2443	5-p	Std. Sedan	895
2584	5-p	Sedan De Luxe	1,095

PACKARD

"6"

3643	4-p	Roadster	\$2,785
3653	5-p	Touring	2,585
3595	4-p	Sp. Touring	2,750
3753	4-p	Coupe	2,585
3937	5-p	Sedan	2,585

(133 in. W. B.)

3793	7-p	Touring	\$2,785
4043	5-p	Sedan	2,785
4133	7-p	Club Sedan	2,725
4133	7-p	Sedan Lim.	2,885

"8"

(136 in. W. B.)

4060	4-p	Runabout	\$3,950
4090	5-p	Touring	3,750
4023	4-p	Sp. Touring	3,900
4242	4-p	Coupe	4,650
4528	5-p	Sedan	4,750
4528	2-p	Coupe	5,775

(143 in. W. B.)

4199	7-p	Touring	\$3,950
4655	5-p	Club Sedan	4,890
4655	7-p	Sedan	5,000
4710	7-p	Sedan Lim	5,100

PAIGE

"24-26"

(125 in. W. B.)

5-p	Std. Sedan	\$1,495
5-p	Sedan De Luxe	1,670
4-p	Cab. Roadster	2,295
7-p	Sedan	1,995
7-p	Limousine	2,245

(115 in. W. B.)

5-p	Brougham	\$1,295
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PEERLESS

"6-72"

(126 in. W. B.)

3175	5-p	Touring	\$1,895
3425	5-p	Coupe	2,295
3500	5-p	Sedan	2,395

(133 in. W. B.)

3300	7-p	Sp. Touring	1,995
3700	7-p	Sedan	2,595
3825	7-p	Limousine	2,695
.....	5-p	De Luxe Sedan	2,795
.....	7-p	De Luxe Sedan	2,995

"6-80"

(116 in. W. B.)

2950	5-p	Sedan	\$1,495
3140	5-p	Std. Sedan	1,595

"6-69"

(133 1/2 in. W. B.)

5-p	Roadster	\$2,995
5-p	Sedan	3,495
7-p	Sedan	3,595
7-p	Berl. Limousine	4,000

PIERCE-ARROW

"33"

4350	2-p	Runabout	\$5,250
4500	4-p	Touring	5,250
4590	7-p	Touring	5,250
4730	3-p	Coupe	6,800
4800	4-p	Sedan	6,900
4960	7-p	Sedan	7,000
4750	4-p	Coupe Sedan	6,900
4730	6-p	Brougham	6,800
4850	7-p	Limousine	7,000
5060	7-p	Enclosed Lim.	7,000
4780	7-p	French Lim.	7,000
4730	6-p	Landaulet	7,000

"80"

3205	2-p	Roadster	\$2,895
3260	4-p	Phaeton	3,095
3385	7-p	Phaeton	2,895
3430	5-p	Coach	3,150
3430	5-p	Coach	3,250
3430	5-p	Coach	3,350
3365	4-p	Lim-Coach	3,450
3335	4-p	Coupe Landau	3,820
3335	4-p	Coupe	3,695
3440	5-p	Sedan	3,895
3560	7-p	Sedan	3,995
3615	7-p	Enc. Dr. Lim.	4,045

PONTIAC

(110 in. W. B.)

2270	2-p	Coupe	\$825
2335	5-p	Coach	825

REO

"T-6"

3375	2-p	Roadster	\$1,665
3182	5-p	Sp. Touring	1,395
3365	2-p	Coupe	1,495
3365	2-p	Spec. Coupe	1,565
3515	5-p	Sedan 4d.	1,565
3565	5-p	Spec. Sedan	1,745

REVERE

"25"

3900	2-p	Sp. Roadster	\$2,750
3975	4-p	Speedster	2,750
4050	5-p	Touring	2,750
4300	5-p	Sedan	3,800

SHIP.

SHIP. WT. PASS. BODY STYLE. PRICE

REVERE (Continued)

3700	2-p	Roadster	\$3,200
3800	4-p	Sportster	3,200
3970	5-p	Touring	3,200
4400	5-p	Sedan	4,000

RICKENBACKER

"E"

(117 in. W. B.)

3038	5-p	Touring	\$1,750
3068	7-p	Touring	1,795
3116	5-p	Coupe-Sedan	1,695
3202	5-p	Brougham	1,895
3040	4-p	Coupe Roadster	1,920
3317	5-p	Coupe DeLuxe	1,995
3353	7-p	Sedan	2,095
3353	7-p	Sedan	2,195

"B-8"

(121 1/2 in. W. B.)

4-p	Roadster	\$2,195
5-p	Touring	2,150
7-p	Touring	2,195
4-p	Sup. Sp. Roadster	3,250

(115 in. W. B.)

3486	6-p	Brougham	2,295
3345	4-p	Coupe Roadster	2,320
3440	4-p	Coupe DeLuxe	2,395
3603	5-p	Sedan	2,495
3640	7-p	Sedan	2,595
.....	4-p	Sup. Sp. Sedan	5,000

ROAMER

"6-50-55" (115 in. W. B.)

5-p	Spec. Tourer	\$1,295
5-p	Spec. Sp. Tourer	1,395
2-p	Bus. Coupe	1,395
5-p	Coupe	1,395
5-p	Sedan DeLuxe	1,695

"6-54-E" (118-138 in. W. B.)

4-p	Roadster	\$2,385
4-p	Tourer	1,985
4-p	Sport	2,285
7-p	Tourer	2,285
3-p	Cabriolet	2,750
5-p	Sedan	2,950

"4-75-E" (128 in. W. B.)

"Custom Built"

2-p	Speedster	\$3,485
3-p	Sport	3,285
4-p	Tourer	2,985

"8-88" (138 in. W. B.)

4-p	Roadster	\$2,750
5-p	Sport	2,750
5-p	Tourer	2,495
7-p	Tourer	2,585
2-p	Speedster	2,985
5-p	Sedan	1,995
3-p	Cabriolet	2,950
5-p	Spec. Sedan	3,485
7-p	Sedan (136 in. W. B.)	3,285
5-p	Brougham	2,895

ROLLS-ROYCE

Chassis

This list comprises cars distributed on a national basis

Motor Age

[illegible]

(Continued on page 48)



the preference for **Lockheeds** stronger than ever

Since their introduction to the public about two and a half years ago, Lockheed Hydraulic Four-Wheel Brakes have gained steadily in public favor . . . Today they are factory equipment on fully one-half of all the chassis models built—and they constitute one of the chief

selling advantages of those cars . . . Another, and perhaps the principal, benefit to the dealer is the fact that with Lockheeds, time and expense for final brake adjustment and service within the period of guarantee—as after that period—is held to a minimum.

HYDRAULIC BRAKE COMPANY, DETROIT, MICHIGAN

The Answer
LOCKHEED HYDRAULIC
Four BRAKES Wheel

(Continued on page 48)
 Var—Varies
 X—Sleeve valve
 Y—Yes
 Quarter ellipse
 Semi-elliptic
 Se—Servo
 OG—Oil and Grease Cups
 OW—Oil cups with wick feed
 P—Single plate
 Pr—Pressure run
 I—F—Internal four wheels
 I—R—Internal rear wheels
 K—Cone
 E—R—External rear wheels
 E—T—External transmission
 F—Fabric
 B—F—Both internal and external, four wheels
 OH—Bevel Gear Overhead shaft
 CH—Chain
 No tie rod

Mechanical Specifications of Current Passenger Car Models—Continued

(This list comprises cars distributed on a national basis)

[illegible]

KEY TO SYMBOLS
 —At extra cost
 —Balloons at extra cost
 —Semi-floating
 —Three-quarter floating
 —Air
 —Aluminum
 —Al—Aluminum
 —B—Semi-steel
 —B-B—F—Both internal and external four wheels
 —BO—Bevel Gear Overhead shaft
 —Ch—Chain

L—L head
m—Metal
M—Mechanical
N—None
N—Platform (rear springs)
O—Optional (brakes)
O—Special type (rear springs)
Oc—Oil cups
OG—Oil and Grease Cups
OW—Oil cups with wick feed
P—Plate
Pl—Plate
W—Welding

PC—Pressure to all crankshaft and connecting rod bearings
PF—Full pressure to all bearings
PK—Pressure to crankshaft, connecting rods and camshaft bearings
PS—Splash with pressure
Pu—Pump
Q—Quarter
RT—Rectifier
Rt—Renti-elliptic

Sp-Splash (lubrication)
Sp-Spur gear (camshaft drive)
Spe-Special make
Sta-Standard
T-T head
Th-Thermo-syphon
V-Cantilever
Var-Varies
V-Sleeve valve
V₂Valves

P-Universal Products
J.G.-Warner Gear
Wag-Wagner
Jar-Warner
at-Watford
es-Westinghouse
M-Willys-Morrow
Wis-Wisconsin
e-Zerk
en-Zenith



A Significant Movement

One of the most significant developments in the motor car industry is the marked trend towards better cars.

This national movement—for it is that in scope—is especially to be noticed in the tremendous sales success of the new 90-degree, eight-cylinder Cadillac.

New thousands each month are turning to Cadillac for the certainty and deep satisfaction which Cadillac ownership entails.

It is the beginning of a period of marked expansion for Cadillac—an era of extraordinary opportunity for business men who are alive to its possibilities.

CADILLAC MOTOR CAR COMPANY, DETROIT
DIVISION OF GENERAL MOTORS CORPORATION

New 90 Degree

C A D I L L A C

Zen-Zenith
Y-Yes
N-No
S-Balloons on closed models

Q-Quarter elliptic
R-Rectifier
S-Standard
H-Hopkins

OC-Oil cups
Oys-Oil cups with wick feed
P-Single plate
Pr-Pressure gun

I-F-Internal four wheels
I-R-Internal rear wheels
K-Quarter elliptic
K-One

EE-R-External rear wheels
EE-T-External transmission
F-Fabric
F1-Full floating

B-Both internal and external four wheels
BO-Bevel Gear Overhead shaft
CH-Chain

LIVE DEALERS

"We installed Apex Innerings in a Model 41 four cylinder NASH car and are pleased to report the following results: This car was giving about fifty miles to the quart of oil and it has now run a distance of eight hundred and seventy-five miles on exactly five quarts of oil. This makes one hundred and seventy-five miles to the quart. We have had this experience on other makes of cars in which we have installed Apex Innerings."

DIXIE HIGHWAY GARAGE
Mount Dora, Florida.

"We are much pleased with Apex Innerings, having found them to be very satisfactory. We anticipate a large sale this Spring."

E. & S. Garage.
Portland, Oregon.

"I cannot say too much for Apex Innerings. They do all you claim and more. I think they would be a good investment in a new motor because they have a tendency to keep cylinders round and thereby eliminate regrinding, which is so common in motors nowadays. I talk Apex to all my customers and friends."

H. W. Gross
Koor, Wyo.

"We have been using Apex Innerings for a long time. Found them very satisfactory and have lots of good boosters for them. We sell a lot of Apex Innerings in this territory."

Motor Sales Co., Inc.
Walla Walla, Wash.

"Nothing but highest praise for Apex Innerings, and we push them to the limit."

Flushing Auto Co.
Flushing, Mich.

"Several days ago we sent you an order for Apex Innerings for a Studebaker, same to be tried out where all other attempts failed. We are pleased to advise you that they have turned the trick. All the people are talking about it, too. They are wondering what I did to stop that oil pumping. But they have to admit that it was done."

M. L. Hayward.
Chelsea, Vt.

"Used Apex Innerings since 1922 on all cars from Fords up and used them in motors when boring had been suggested. I haven't failed once to satisfy the owners. You can't get a better job than the Apex can do for you. Am very careful that my Apex stock is kept up."

Blazier Garage & Repair Shop.
Alton, Ill.

"Have used Apex Innerings in different cars and they have proven satisfactory in every way."

Bland's Garage.
Worcester, Mass.

These letters tell the same story that thousands of garage owners and car dealers in the United States and Canada can tell: that story is—How Apex Genuine Innerings have simplified the stopping of oil pumping and piston slap; opened up a new avenue to big profits; turned used cars into quick cash; satisfied car owners by adding thousands of miles to the life of every used car at small cost.

APEX GENUINE Innerings

MAKE MONEY ON APEX Genuine Innerings

Installing Genuine Apex Innerings is a big business. It is a money making business. Installations run into millions of dollars every year.

1. Garage owners have separate Apex Innering departments and make them pay big.
2. Automobile dealers re-build trade-ins with Apex Innerings and find ready buyers at generous profits.
3. Re-grinders use Genuine Apex Innerings on those re-conditioning jobs where the car owner does not want to go to the expense of re-boring.
4. And no other item in jobbers' stocks make more dealer friends or offer a faster turn-over on such a small investment. Apex Innerings are sold with new piston rings on replacement jobs and thereby greatly increase piston ring sales.

There is no substitute for satisfaction. There is no substitute for Genuine Apex Innerings. No imitation can work so silently or efficiently in stopping oil pumping and piston slap without re-boring. Every mechanic who ever used them knows this to be a fact.

GUARANTEED TO STOP OIL PUMPING AND PISTON SLAP

Guaranteed, also, to re-new power, pick-up and performance without re-grinding. Genuine Apex Innerings are adjustable to fit the needs of every job and only Apex can fit every motor successfully.

One proof of their dominating success is the fact that over 300 of the finest jobbing houses in United States and Canada stock Apex. These big jobbers know that the patented Apex design is the only way to make a successful innering that has no come-backs; that the Thomson Mfg. Co. is the only maker having an Innering to which a money back guarantee tag can be attached.

Dealers: Accept no substitute. If your favorite jobber does not have Genuine Apex, write us. We will see you are supplied instantly. Write for discounts.

Jobbers: We have a special plan that makes it possible for you to try out Genuine Apex Innerings without any financial investment on your part. Only a small stock is necessary. 12 turn-overs a year are possible. Profits are unusual. Write for discounts and jobber helps.

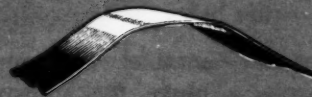
THOMSON MFG. CO.

Department 7

PEORIA, ILLINOIS



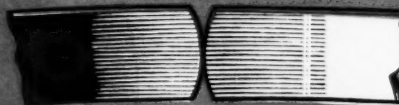
Three Vital Features Found Only in Genuine Apex Innerings



Short curved crimp, adjustable to just the proper cushion to fit any motor. Has broad bearing surface—can't wear through or break.



Long reverse curve, centralizes and stabilizes the piston; takes up the first shock of the piston slap. Imitations with flat sides do not have this added cushion.



Cut between crimps, insures an equal cushion the entire circumference of the ring. Cutting any other way causes a weak side that can not give an equal radial cushion.

APEX GENUINE Innerings



PACKARD

adopts

The Budd-Michelin Wheel

NEWS ITEM . . . Budd-Michelin All-Steel Wheels are now standard equipment on all models of the Packard . . . both Six and Eight

The All-Steel Wheel with an exclusive *convex* form that increases resilience

—that gives the brakes better protection against mud and water and dust

—that hides the brakes from view

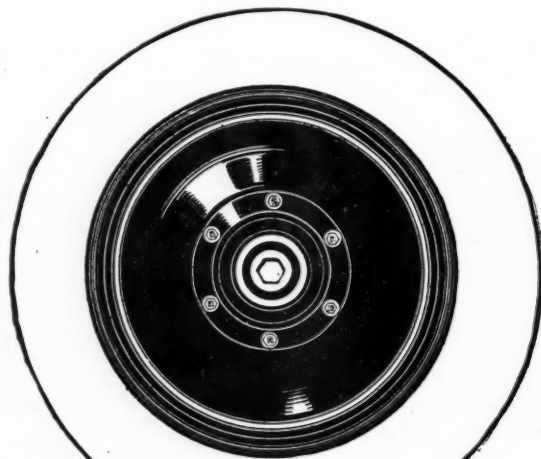
A demountable wheel—one minute to expose a brake for adjustment—three

minutes to change to the spare tire carried on the *extra* wheel in the rear. No rims to remove. Just a few turns on the self-locking nuts at the hub.

A safe wheel—it can't collapse in collisions.

A clean and beautiful wheel, streamlined—an aristocrat, like the rest of the car.

Budd-Michelin Wheels . . . the last step in making the motor car completely modern



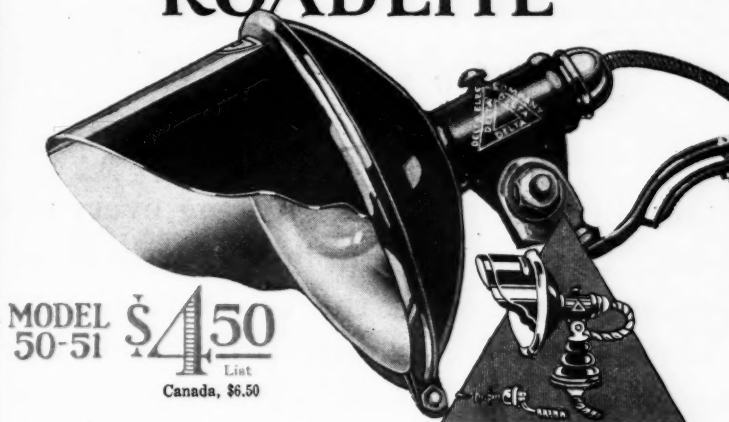
BUDD

WHEEL COMPANY
Detroit and Philadelphia

"Goodbye, buggy wheels"

Delta

ROADLITE



MODEL 50-51 \$4.50
List
Canada, \$6.50

Advertised in Liberty

The fast selling Delta RoadLite. People see it and buy it. Orders are pouring in. It's a proven seller—and we're telling the world. Our next ad—shown here—comes out in Liberty Weekly—issue of April 24th. See your jobber now for stock. Legal anywhere.

Two styles of brackets—50 and 51—to fit any car anywhere. Interchangeable. Scientifically designed. Triple silvered and dust-proofed reflector. Drawn metal brackets. Hand buffed nickel trimmings. Precision manufacture—seven inspections—new, intense light on the road. A jewel in design and finish—a blazer in performance. Alluring to all motorists—and a compelling surprise in price—\$4.50. Write for full information.

DELTA ELECTRIC COMPANY
403 Delta Block Marion, Indiana

No. 51 Pedestal Bracket Style,
interchangeable with No. 50,
clamp bracket

Delta

ROADLITE



\$4.50

No Need to Fear Night Driving Now

The Delta RoadLite makes night driving safer by eliminating the glare from your own or the retaliatory flash of the other fellow's lights. It was produced after months of laboratory study and actual traffic tests. The superiority of the Delta lies in its scientific design. The vision path—otherwise wasted beams and swirls of the oncoming driver, out of the eyes of the driver on the road surface, out of the eyes of the highway. Longer range, brighter light, no glare, greater coverage of the immediate path—these are Delta accomplishments in this RoadLite.

It is a beautiful light for beautiful cars. Two styles of brackets to choose from—to permit mounting anywhere on the frame of your car. The price, complete, with 9 ft. armored cable and dash switch, is only \$4.50. Slightly higher West of Rockies.

We will gladly send descriptive literature on this and other models. If your dealer does not have the model you want, write to us.

DELTA ELECTRIC COMPANY
403 Delta Block Marion, Indiana





“Flint Sales Are Growing”

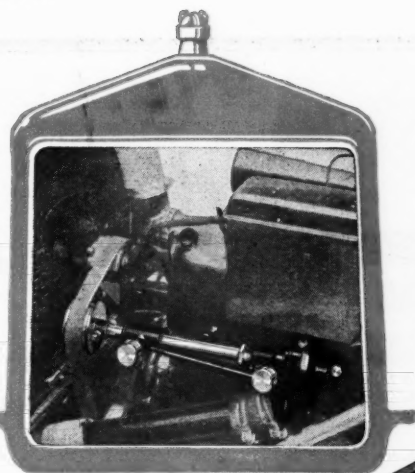
- Q And because they are growing everywhere, we are telling the public about it in newspapers throughout the country. The result is that more and more prospective buyers are finding their way into Flint salesrooms everywhere, to learn more about the reasons why Flint sales are growing.
- Q After they find out, the happiness is split three ways—the owners, the dealers and us.
- Q So much for the value of good news.

Vice President and General Manager

FLINT MOTOR COMPANY
FLINT, MICHIGAN

BUILDERS OF HIGH GRADE MOTOR CARS

♥ F L I N T ♥



*Ideal Installations for
1926 FORDS and all
previous models.*



Turn Hot Motors into Cold Cash

SELL Blackhawk Pumps and turn boiling radiators into cold cash. Dealers everywhere are building volume business with the Blackhawk line.

Push the "Chief" for quality trade and the "Scout" to meet price competition.

The "Chief" outpumps any other circulator built for Fords because of the exclusive Turbine Head feature. Double bronze bearings with positive lubrication assure long life. Both the "Chief" and the "Scout" are built for long, efficient service.

Display stand free with first order for six pumps.

*Write for particulars today
about these all year sellers.*

BLACKHAWK MANUFACTURING COMPANY

DEPT. S, MILWAUKEE, WISCONSIN

Export Office: 130 West 42nd St., New York City, U. S. A.

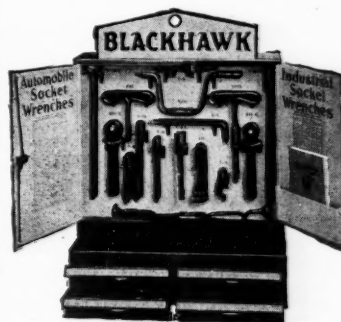
The "Chief"
complete including
belt and horn
bracket, \$7.50.

The "Scout"
complete, as
above, \$5.50.



Rest-A-Foot Throttle

Complete accelerator and automatic foot-rest combined. The foot-rest follows the throttle—no lurching over rough roads. No fatigue or leg strain. Model for Fords \$3.00 list. Write for literature.



Blackhawk Wrenches

Springtime brings a peak demand for detachable and fixed handle wrenches. Sell special sets from the Blackhawk Display Stand. The Sales book tells you how to make them up. Ask how to get the "Q. D." Display Cabinet—a time-proved salesman.

BLACKHAWK

GATES BELTS

"The Standardized Fan Belt"

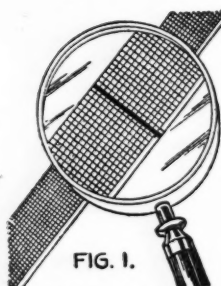


FIG. 1.

Ordinary fan belt. Threads run lengthwise and across. To break this belt on the marked line only the lengthwise threads need be broken.

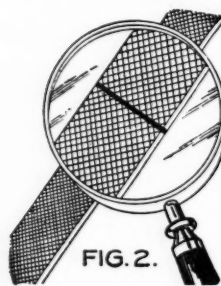


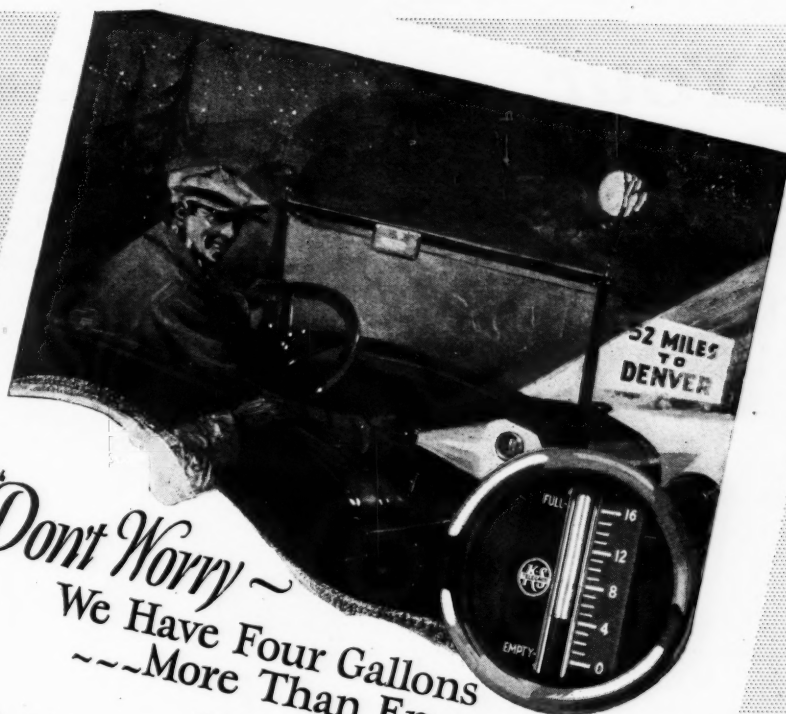
FIG. 2.

Gates Vulco Belt. Threads run diagonally. To break this belt every thread both lengthwise and across must be broken. This bias weave construction is patented.

The reason for the double durability of Gates Vulco Belts is quickly told. It's the bias weave construction (Patented)—and the simple diagrams above will show you WHY.

Made by the World's Largest
Manufacturers of Fan Belts.

We show herewith one of our half pages as it will appear in the April 17th issue of the Saturday Evening Post.



**"Don't Worry ~
We Have Four Gallons
---More Than Enough**

**Complete
Ready
to Install
\$8.50~**

52 miles to go, three o'clock in morning, all gas stations closed—gallons in the tank. What a relief know that when the Telegage says 1 gallons, it means exactly that. 1 can "Be certain with the Telegage

THERE are times when a motorist must guess would invite disaster. It is this accurate dependability that will mean most to the Telegage. An inaccurate gauge is worse than at all. Instead of helping you out of trouble, simply steer you straight into it.

The Telegage on your car will bring a new sense of security when driving. It will keep you posted your driving radius when far from home. It will enable you to buy gasoline intelligently—to order the amount you need.

The accuracy and dependability of the Telegage is due primarily to its simple construction, with no moving parts to wear or out of order. Based on a fundamental scientific principle it does not swerve from its absolute standard of accuracy. Try this faithful Red Column of the Telegage will check your filling gauge for gallon.

You need the Telegage on your car. Ask your car dealer about it. He can install it quickly and easily. The tank unit fits into the float gauge opening, and a template (included) makes it simple to fit on the instrument board. Or we will send instrument complete with directions for installing on receipt of price \$8.50. Simply mark coupon below and enclose with check.

KING-SEELEY CORPORATION
ANN ARBOR, MICHIGAN
294 SECOND STREET
Chicago Branch, 2450 Michigan Boulevard

**The K-S GASOLINE
Telegage**



BE CERTAIN WITH THE K-S TELEGAGE

Put a check mark in front of the car you drive. If your car is not listed here write us—it may be on a later list.
KING-SEELEY CORPORATION, Accessory Division, 294 Second St., Ann Arbor, Mich.
Gentlemen: Send me one Telegage as marked below:

- | | | | |
|---|--|---|--|
| <input type="checkbox"/> Dodge, 1920-26 | <input type="checkbox"/> Nash Special 6, 1925 | <input type="checkbox"/> Olds 6, 1925-26 | <input type="checkbox"/> Essex 6, |
| <input type="checkbox"/> Jewett, 1922-25 | <input type="checkbox"/> Nash Special 6, 1926 | <input type="checkbox"/> Oakland 6, 1924-26 | <input type="checkbox"/> 11 gal. tank only |
| <input type="checkbox"/> Buick Standard 6, All | <input type="checkbox"/> Nash Advanced 6, 1922-25 | <input type="checkbox"/> Reo, 1923-26 | <input type="checkbox"/> Pontiac, All |
| <input type="checkbox"/> Overland 6, All | <input type="checkbox"/> Hudson, 1921-26 | <input type="checkbox"/> Flint 40, 1924-25 | <input type="checkbox"/> Ajax, All |
| <input type="checkbox"/> Buick Master 6 not equipped with dash gauge, 1924-26 | <input type="checkbox"/> Chrysler 6 not equipped dash gauge, All | <input type="checkbox"/> Chrysler 6 equipped with dash gauge, All | <input type="checkbox"/> Chrysler 4, All |
| <input type="checkbox"/> Buick Master 6 equipped with dash gauge, 1925-1926 | | | |

Write your name on margin below, tear out coupon, and mail to us with your check.

Over the Top!

IN less than eighteen months, the K-S Telegage has grown from 1,000 a month to 35,000, as standard equipment on twelve leading cars. Thousands of motorists are having it installed on cars that are not yet so equipped.

Such a remarkable growth means much to the alert dealer. It is not only selling rapidly as a profitable accessory, but large car dealers are installing it on every car they sell. With our enlarged campaign in the Saturday Evening Post, it pays to offer it on the cars you sell, before your prospective customer asks about it. Write today for our proposition to the trade.

KING-SEELEY CORPORATION
298 Second Street
ANN ARBOR MICHIGAN

Chicago Branch
2450 Michigan Boulevard

Do Your PROFITS *satisfy* You?

A message intended for repair shops, garages, service stations and equipment dealers who **STILL** want to make more profits—not for the man who is fully satisfied with his profits.

THOUSANDS of dollars of profitable business is being neglected daily by at least 75% of the country's repair shops, service stations and equipment dealers.

And merely because their eyes have not really been opened to it.

We refer to the big number of *Brake Relining jobs that are badly needed—yet almost never solicited.*

Examine the brakes of the next dozen cars that come to you. Out of that number you will find never less than one car—probably several more—in urgent need of new brake linings. Your *profit* on each such job, at Multibestos flat rate prices, will be higher than the profit on a big percentage of the single equipment items you sell.

Isn't this business that is worth going after—especially when it means just keeping your eyes open?

Send the attached coupon for the Multibestos Plan for Securing Brake Relining Business.

MULTIBESTOS COMPANY, Walpole, Mass., U. S. A.



MULTIBESTOS

REG. U. S. PAT. OFF.

BRAKE LINING



One of the Multibestos page ads in colors appearing in consumer magazines. The Traffic Cop is a friend of good brakes. Whenever you see him think of Multibestos Brake Lining.



ALSO

Multibestos Taxitrux Brake Lining
Multibestos 229 Transmission Lining for Ford Cars
Multibestos Special Transmission Lining for Ford Cars
Multibestos No-Wire Transmission Lining for Ford Cars
Multibestos Fibre Transmission Lining for Ford Trucks
Multibestos Clutch Linings

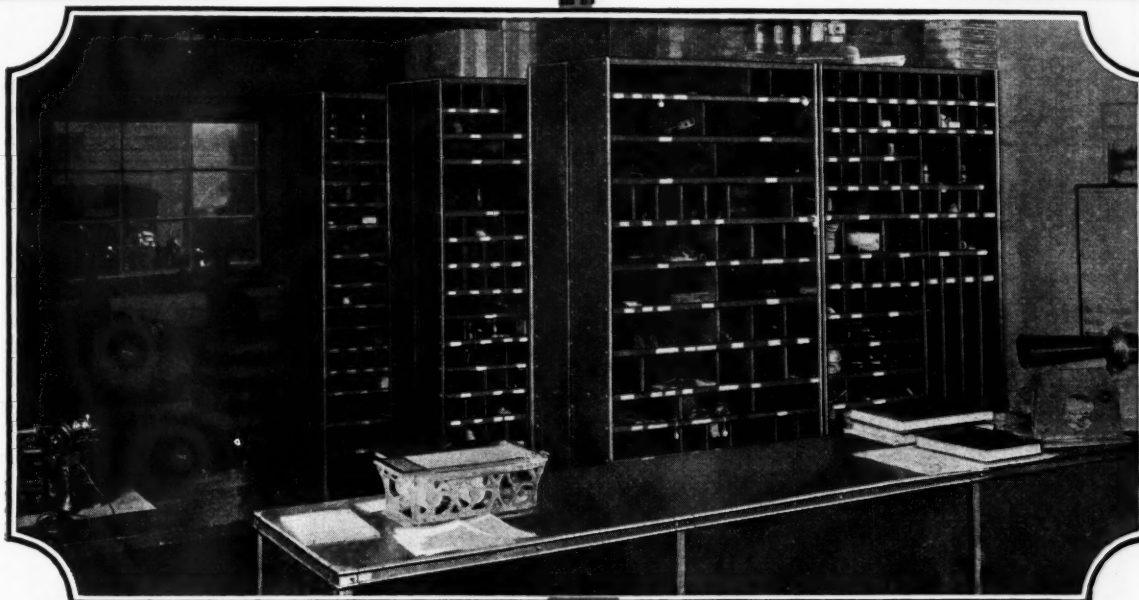
MAIL THIS TODAY

MULTIBESTOS COMPANY
 Dept. MA-4, Walpole, Mass.
 Please send me details of the Multibestos Plan to increase my profits.

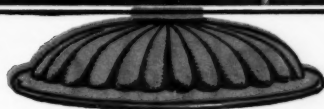
Name

Address

.....



LAPS System and Lupton Display Counter in parts department of Wm. L. Keller, Dodge Dealer in Olympia, Wash.



Keep a balanced stock with LAPS

TO be a successful dealer you should carry a stock of replacement parts sufficient to service all cars in your territory.

This necessitates balancing the parts stock to make a complete turnover four times a year, the sole arrangement under which you can protect your investment and show good profits.

By automatically balancing your stock, the LAPS* System designed for your business will insure your success. A LAPS* System holds just the number of items which experience has shown are constantly in demand. It reminds

your parts-man to sell slow-moving items and to reorder the quick sellers.

A Lupton Auto Parts Storage System will not only cut your overhead expenses by confining your invested capital to lines of rapid turnover, but by saving floor space, and by holding equipment depreciation to a minimum. In addition, LAPS* speeds up service to shop and customer, and increases sales by good display.

Let us know how many cars you service, and we will specify a System that is certain to make your parts department profitable.



Tire Rack: Essential to neat store. In 4 units, 2 or 3 tiers high. 2 tier rack, \$20.00. 3 tier rack, \$31.00.

DAVID LUPTON'S SONS COMPANY
2631 WOODWARD AVE., DETROIT

SOLE MANUFACTURERS of
*LUPTON AUTO PARTS STORAGE SYSTEMS



Spring Rack: Keeps springs, bars, shafts, etc., in order. Price only \$20. F. O. B. warehouses, Chicago, Cleveland or Philadelphia

LUPTON AUTO PARTS STORAGE



Doubled his sales in six months with Prest-O-Lite

THE following letter recently received from The Motor Inn at Wichita, Kansas, is one more proof that the advertising and merchandising plans back of Prest-O-Lite Batteries are productive and that the battery itself is the kind of a battery that motor-car owners want.

Here is what Mr. H. S. Wise, Manager of The Motor Inn, wrote us:

"I signed up with the Prest-O-Lite Company six months ago, after handling _____ Batteries for one year, and am pleased to inform you that I have more than doubled my sales the first six months.

"I find that the Prest-O-Lite advertising and merchandising plan has been a great help in getting greater volume of sales."

Prest-O-Lite Batteries offer any dealer or service station the same opportunities for increased business and greater profit. There is not only the motor-car business to be considered, but also the radio end. Prest-O-Lite Storage "A" and "B" Batteries, made especially for radio, are producing profitable business for all Prest-O-Lite dealers who are handling them. The exceptional quality and longer life of these batteries builds real good-will.

Write us for details of our selling plan and for our service station proposition.

THE PREST-O-LITE CO., INC.

INDIANAPOLIS, IND.

New York

San Francisco

In Canada: Prest-O-Lite Company of Canada, Ltd., Toronto, Ontario

Prest-O-Lite





The well posted dealer concentrates his sales efforts on AC products.



He knows that the foremost automotive engineers specify AC products as standard equipment for the very good reason that they perform best. That is the reason for their assured market. Backed by strong advertising, they are sold to motorists without sales resistance. They carry a good margin of profit.

AC-SPHINX
Birmingham
ENGLAND

AC Spark Plug Company, FLINT, Michigan
Makers of AC Spark Plugs—AC Speedometers—AC Air Cleaners

AC-OLEO
Leralliois-Perret
FRANCE

AC SPARK PLUGS

THE new AC Spark Plug marks the greatest advance made in spark plug construction in years.

A new design, a new alloy for sparking points, a new electrically fused Kyanite insulator core and a new glaze—in a type and size for every motor.

For Fords there is the famous AC 075, embodying the above improvements as well as many other special features—and it is now made in both one- and two-piece design.

AC SPEEDOMETERS

THE AC Speedometer for Fords is of the same high quality as furnished for original factory equipment to the manufacturers of Buick, Cadillac, Chandler, Chevrolet, Chrysler, Gray, Oakland, Oldsmobile, Peerless, Pontiac and GMC Trucks.

There is no swivel joint between the front wheel and the instrument—it drives direct—exclusively an AC feature, insuring continuously satisfactory service.

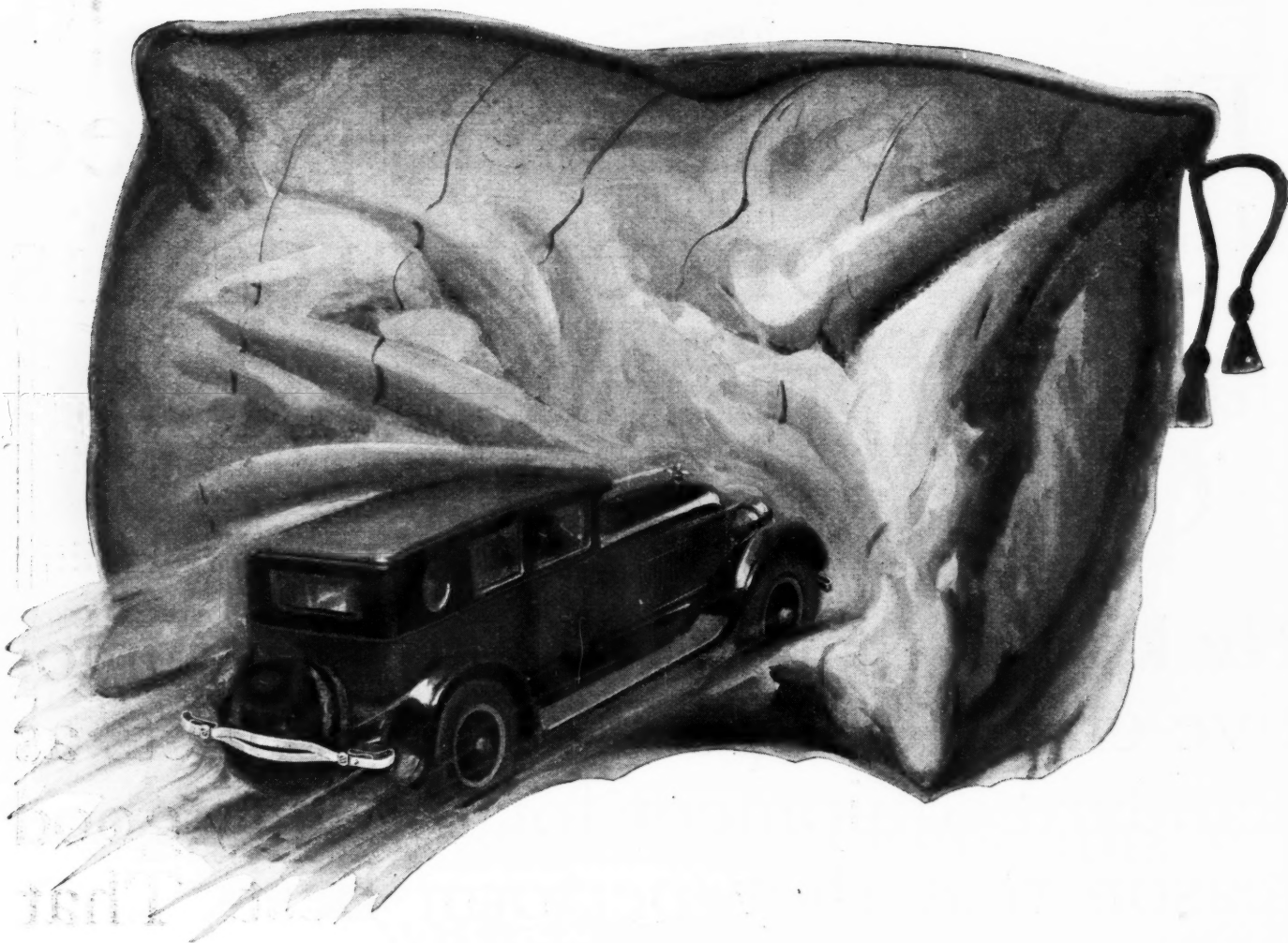
Packed complete with all installation attachments, easily mounted and reasonably priced.

AC AIR CLEANERS

THE AC Air Cleaner prevents dust from entering the motor through the air intake of the carburetor, thereby eliminating excessive wear on the motor's moving parts.

Original factory equipment on Buick, Davis, Locomobile "Jr. 8", Oakland, Nash, Stutz and Willys-Knight "6"—Models available for installation on Chevrolet, Chrysler 4, Dodge Brothers, Ford, Maxwell, Oldsmobile, Star, Studebaker, as well as the 1925 and earlier models of Buick, Nash and Oakland.

Packed complete with all installation attachments, easily mounted and reasonably priced.



What a *Cushion* Bumper means

IF you drove your car at 50 miles an hour into a deep, soft cushion five times its size, the terrific impact would be absorbed within the cushion. Car and occupants would be unharmed.

But drive that same car at the same speed into a stone wall the same size and the result would be a complete smash-up and loss of life.

There you have the difference between a cushion bumper, such as Biflex, and a rigid, non-cushion bumper capable

only of warding off light traffic jolts. Biflex is constructed in the form of a great steel hoop—actually a live spring of powerful resiliency—that absorbs and cushions the severest shocks.

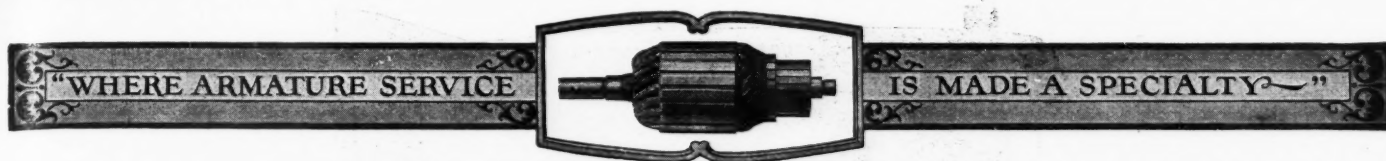
To save your life you can't get better protection than Biflex cushion protection. Bumpers and Rear Guards for all automobiles.

Write to factory for book, "How One Automobile Dealer Stopped Kicks and Cut Down Free Service Costs."

BIFLEX CORPORATION, WAUKEGAN, ILL.

(68)

Biflex



Now
The Originators of Guaranteed Armature Service
 Are
**The Originators of Replacement
 Generator Field Coils**



Guaranteed Armature Service was first made possible by the U. S. Auto Supply Company, and now this same organization—U. S. Armature & Motor Service—provides you with replacement generator field coils.

Quit retaping oil-soaked coils. Use U. S. Replacement coils. You sell more parts and build a bigger paying business. A small assortment will fit more than 100 car applications; they are uniform in list price—Fords \$1.50—all others \$3.60. Conveniently packed. Fords 10 in a box, others one to a box.

A small investment gives you a complete stock. Order today, and take advantage of special price on your opening requirements.

A Half Million Shipped

And we still ship from our permanent stock of 8,000 armatures the same day we receive defectives from the transportation company.

As always you are in a position to take advantage of our reliable service in rewound armatures, at the lowest possible prices. Write for our price list. It's complete—and free.

Also ask about our Special Repair Service for all types of electrically-driven tools and shop equipment.

Many jobbers are selling our complete service.

Write

U. S. Armature & Motor Service

(Division U. S. Auto Supply Co.)

11-17 S. Desplaines St.

Chicago





**ATTRACTIVE
APPEARANCE**

**DEPENDABLE
QUALITY**

FULL COVERS

EXTREME ECONOMY

You get them all in Thomas Seat Covers and Semi-Seat Covers and with

them a lion's share of the seat cover business.

Thomas

Thomas Seat Covers: Wide variety of choice materials for practically all makes of cars. Here are a few examples of the big money-saving prices:

Chevrolet, Star and Overland cars:

\$9.20 to \$18.60

Larger cars: \$10.00 to \$28.50

Thomas Semi-Seat Covers: For cushions and backs only. Custom made. Individual patterns for each model. For any make car at prices that make selling easy.

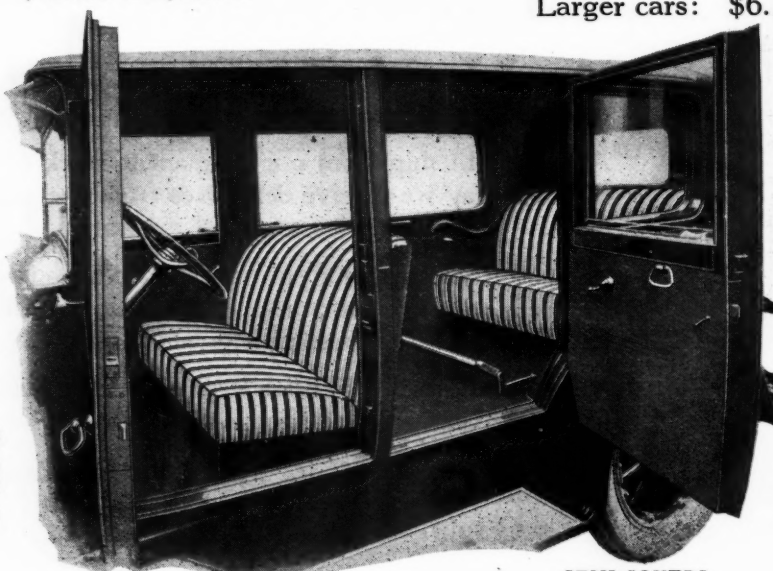
Chevrolet, Star and Overland cars:

\$5.90 to \$10.40

Prices for Fords: \$4.20 to \$7.70

Larger cars: \$6.70 to \$12.50

**SOLD BY
LEADING
JOBBER
EVERYWHERE**



SEMI-COVERS

Write us for new catalog with complete details and liberal discounts.

New attractive sample display counter cards ready for shipment. Sent free upon request.

Thomas Auto Top Company

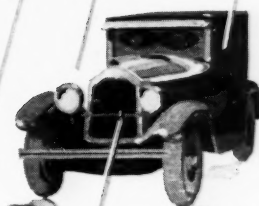
**Radiator Covers
Tire Covers**

MUNCIE — INDIANA

**Top Recovers
Seat Covers**



safety



The Bosch Tandem Attachment gives full vision to both front seat occupants—\$1.75 extra

YOU NEED THESE BOSCH ELECTRIC WINDSHIELD WIPER ADVANTAGES

- 1—Electrically Operated. Leaves both hands free.
- 2—Unusual Power, ample for cleaning heavy snow.
- 3—Steady, Positive, Unvarying Speed.
- 4—Quiet, practically noiseless.
- 5—Compact, Unobstructed Vision.
- 6—Non-smearing, Spring pressure insures clean wipe.
- 7—Adjustable, up and down—in and out—adjusts to any windshield.
- 8—Rugged, Long in life, Free from trouble.
- 9—Tandem Attachment. Full vision—All can see ALL.
- 10—Bosch Made, Embodies Bosch Precision, backed by Bosch Service everywhere.
- 11—Economical, Negligible current consumption.
- 12—Independent Unit, Does not effect carburetion—Unaffected by engine speed.



Not only safety for the customer but safety is provided the dealer as well, when he sells the Bosch Electric Windshield Wiper. Safe for the dealer because he has an Electric Windshield Wiper with the sales features and quality of performance which makes it a fast selling item. He is selling at a good profit, a well advertised, widely used and favorably known article for which there is a real demand and which stays sold. You may not know why the Bosch Windshield wiper leads all others in sales features and you may not know just how profitable this item is in the Bosch Long-Line of Profit Makers. The nearest Bosch Branch will give you the details and an outline of the money making possibilities of the Bosch Merchandising Plan.

Price \$9.50 complete - Tandem attachment \$1.75 extra

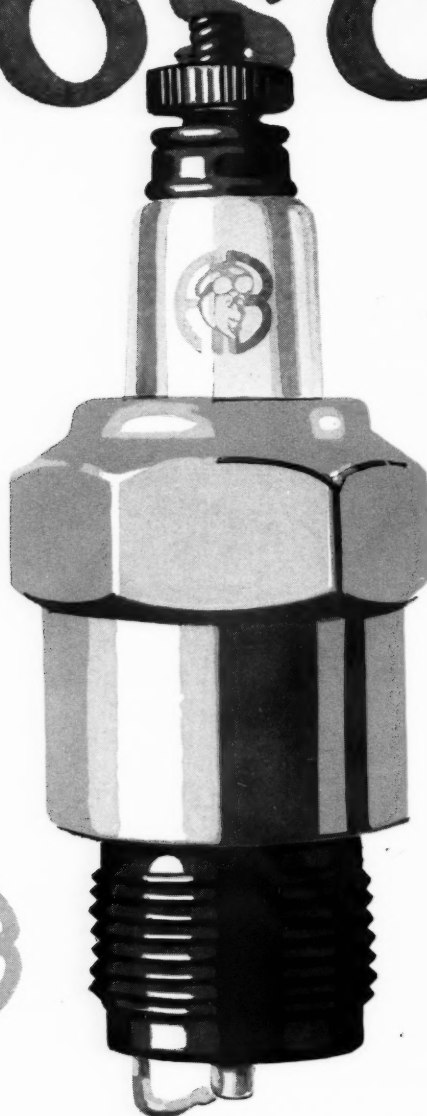
AMERICAN BOSCH MAGNETO CORPORATION
Main Office and Works: Springfield, Mass.

BRANCHES: New York Chicago Detroit San Francisco

BOSCH Windshield Wiper

ELECTRIC

BOSCH



For profit and satisfaction sell the Red Bosch Spark Plug. In doing so you build customer satisfaction. It is a repeat item as all Bosch Plug users know they are dependable. They like the easier starting, the leak-proof construction, the ribbonlike spark, the crescent shaped non-burning electrodes and the granite-like insulator which defies the slipping wrench. Much advertised and well known, the RED Bosch Spark Plug is a real trade builder. Your wholesaler or the nearest Bosch Branch will quickly supply you with any quantity.

Ford Size, 75c

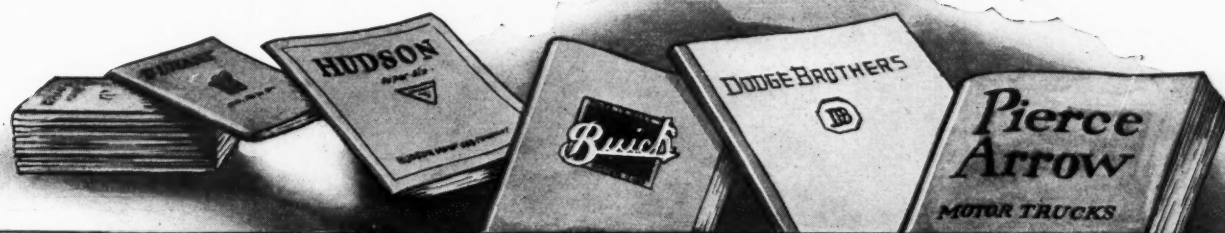
Regulars, \$1.00

AMERICAN BOSCH MAGNETO CORPORATION

Main Office and Works: Springfield, Mass.

BRANCHES: New York · Chicago · Detroit · San Francisco

SPARK PLUGS



129 CAR CATALOGUES COMBINED IN THIS 1 BOOK

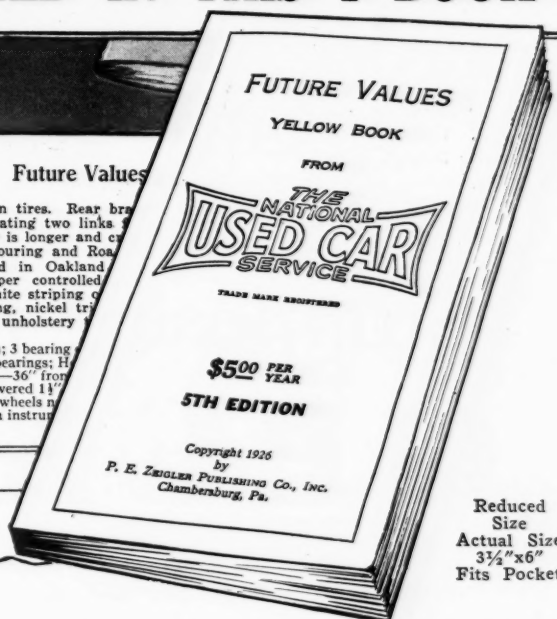
OAKLAND—Continued

1925—The 6-54 models are continued this year (1925). Landau-Sedan added. 31x4.95 Balloon tires. Rear br construction changed by increasing length of band levers and curving them backward eliminating two links mery used. Ball thrust bearings used on front axle kings pins, replacing washers. Radiator is longer and c now passes through shell instead of apron. Front fender tie rod eliminated. On Special touring and Roa models, fender guards in rear have replaced full width bumpers. These models are finished in Oakland with black striping. Closed models have new type sun visor and automatic wind-shield wiper controlled dash. Wind-shields are Fisher one-piece VV. Standard bodies are in Holland Blue with white striping and wheels. The new Landau Sedan is finished in Buckingham Gray Duco with red striping, nickel tr and black fenders. Has oval windows in rear quarters with carriage irons. Plush mohair upholstery finish.

1926—Model 6-54, 6-cyl.; L-head motor; 113" W. B.; 30x5.25 balloon tires, chain drive; semi-steel pistons; 3 bearing Stromberg carburetor; Remy electric system, pressure lubrication to main connecting rod and camshaft bearings; H plate clutch, semi-floating rear axle; mechanical 4-wheel brakes; Jacox steering gear; semi-elliptic springs—36" front Dot chassis lubrication. First year with oil filter; harmonic balancer and air cleaner, running boards lowered 11" removed from side of engine and placed under cowl; fenders are full crowned and deeper by 1"; artillery wheels n models, ignition switch and carburetor choke removed from center of steering wheel and placed back on instru bodies by Fisher finished in Duco.

Model	Year	Type	Pass. Capy.	Cyl.	Bore	Stroke	H.P.	Price	Serial Number
6-54	1925	Sp. Touring	5	6	2 1/4	4 1/2	19	1195	
6-54	1925	Landau Cpe.	3	6	2 1/4	4 1/2	19	1125	
6-54	1925	Coupe	4	6	2 1/4	4 1/2	19	1195	
6-54	1925	Sedan	5	6	2 1/4	4 1/2	19	1195	

Future Values



Reduced
Size
Actual Size
3 1/2" x 6"
Fits Pocket

SPECIMEN
PAGE

Containing descriptions, specifications and prices of 129 makes and models—plus TRADE-IN VALUES of each one

For new car salesmen, used car salesmen and buyers, car appraisers and all who have need for the latest information covering car descriptions, car specifications and car prices.

400 pages in pocket size (3 1/2" x 6") covering—

“complete mechanical specifications on 129 cars and all the models for years back.
comparison of equipment.
serial numbers. Factory prices.

complete information for identifying used cars.

high and low used car prices.
and *in code* the highest price you can give for a used car and make money.”

Issued every three months or four times a year. 5 days examination privilege. Subscription price \$5.00 for year, four issues. NATIONAL USED CAR SERVICE, CHAMBERSBURG, Pa.

Future Values

The little yellow book

ILLUSTRATIONS
such as this are appearing periodically in the Saturday Evening Post and are broadcasting the story of Opex throughout the nation. Consumer demand is the dealer's cue.



Stop losing money on trade-ins.

OPEX—the perfected lacquer turns losses into profit

“OVER twenty-three million dollars are lost to dealers annually in used car sales.”—National Automobile Dealers Association.

You know how hard it is to get a fair price on a used-car job when the finish is weathered, chipped and rusted. Even if the motor and body are in the best of condition you can't always prove it. *Looks* govern nine sales out of ten.

You *can* dispose of your used cars at a profit. Opex will do it.

You know that lacquer is now considered *the* finish. Most important: Opex can be applied over the old finish. It can be applied economically at the rate of one coat per hour. And *it looks like an original finish.*

You should know more about our Opex proposition. If you do not have an inexpensive but adequate refinishing booth, you are losing quick profits on your trade-ins.

Send coupon for details.

SHERWIN-WILLIAMS

OPEX



The Sherwin-Williams Co.,
420 Canal Road, Cleveland, O.

Supply us, entirely without obligation, full details of your Opex perfected lacquer proposition.

Name.....

Address.....



McQUAY-NORRIS OIL RINGS



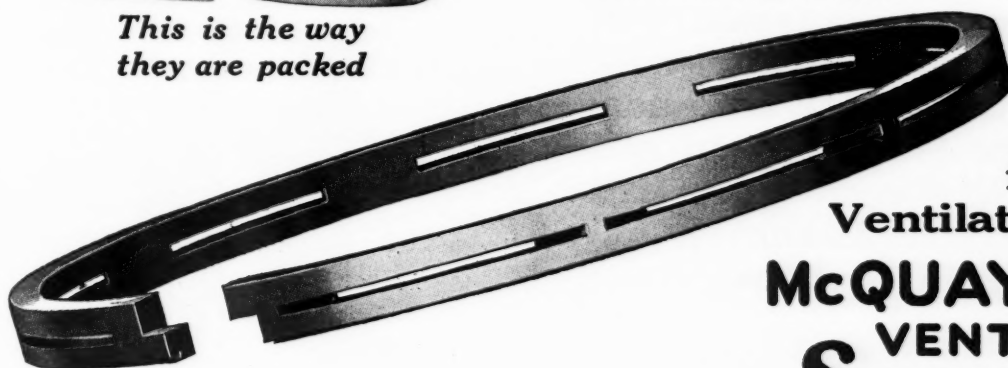
for Pistons
that are not drilled
McQUAY-NORRIS
Superoyl
REG. U.S. PAT. OFF.
RINGS

Price 50¢ each



*This is the way
they are packed*

The ring designed on the oil-scraping principle which McQuay-Norris introduced seven years ago. For use only with pistons which are not drilled. Made in all sizes and over-sizes from McQuay-Norris electric iron. Packed 12 rings to a carton. Price 50¢ each in all sizes from $2\frac{3}{8}$ to $4\frac{1}{8}$.



for
Ventilated Pistons
McQUAY-NORRIS
VENTILATED
Superoyl
REG. U.S. PAT. OFF.
RINGS

Price 50¢ each

An oil ring combining the oil-scraping principle with ventilating slots. Especially designed for use only with ventilated or drilled pistons. Made in all sizes and over-sizes from McQuay-Norris electric iron. Step joint, of course. Packed 12 rings to a box. Price 50¢ each, in all sizes from $2\frac{3}{8}$ to $4\frac{1}{8}$.

McQUAY-NORRIS MANUFACTURING COMPANY General Offices: ST. LOUIS, U. S. A.
Factories: St. Louis, Indianapolis, Connersville, Ind.; Toronto, Canada

PISTON RINGS-PISTONS-PINS-BEARINGS



A display is just as necessary in an Accessory Window as in a Drug Window. Many dealers recognize this, and, to assist them, I am giving away ten thousand eight color window pieces. One display comes packed with ten Balloon Jacks — three styles shown on this page—just the jacks that car owners will want for the touring season. Put this display in your window and you will be amazed at the jacks it will sell to people who have had average tire changing experience on the road . . .

Willard Walker

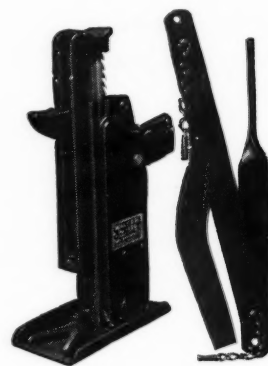
President
Walker Manufacturing Co.
Racine, Wis.



The No. 520 telescoping screw jack, for the cars with balloon tires and low axles, and cars equipped with bumpers, spare tires, etc.



The No. 126 is a real man's jack — strong — sturdy—with adjustable foot for any height of lift, and long pumping type handle. There isn't a motor car lift you can't make with the 126.



The No. 620 steel foot lift jack is built to use on small cars equipped with balloon tires and any size cord or fabric tire.

Walker Jacks

"Dependable in Service"



AUBURN

SUCCESS

The policy of the Auburn Automobile Company is to continually strive to build each and every car better, so that it will always run satisfactorily and maintain its maximum efficiency. We adhere rigidly to the sound policies that have made great successes such as Cadillac and Dodge. Fundamentally a motor car is transportation. As such, it must be so well built as to endure with an extreme minimum of petty annoyances and also protect the owner's investment by an extremely high resale value. Resale value depends first upon the up-to-date external appearance, second upon internal appearance and third upon performance. Only the most scrupulous quality methods and meticulous attention to every detail can produce such a fine car. Auburn's remarkable success is built firmly upon this policy—not upon attempts to divert the buyer's attention from fundamentals by trick appearance, trick feats of performance or trick prices. The reward for this policy is found in the inalienable goodwill

of Auburn owners and in Auburn's rapid growth.

On March first last year Auburn had unfilled orders representing a valuation of \$75,000.00—today over \$8,000,000.00. Our factory sales increased 200% in 1925. We expect this year an increase of 300%.

Auburn has greatly enlarged its production capacity and conservative estimates indicate a public demand for over \$35,000,000.00 worth of Auburn cars in 1926.

Despite the hectic "price cutting war," which Auburn predicted in 1925, Auburn prices were not reduced during that entire period and our sales increased from month to month because Auburn gave the greatest value for the least commensurate cost at the START of the year. Again Auburn continues the policy in 1926 of giving the greatest value for the least cost.

In contrast to superlatives in advertising and extravagant sales-talk Auburn simply says: See, drive, test, and compare the new Auburn. If it does not sell itself on sheer merit, you will not be asked to buy.

—E. L. CORD

President

[8-88 Sedan \$1995; 8-88 Brougham \$1795; 8-88 Coupe \$1745; 8-88 Roadster \$1695; 8-88 Touring \$1695; 6-66 Sedan \$1695; 6-66 Brougham \$1495; 6-66 Coupe \$1445; 6-66 Roadster \$1395; 6-66 Touring \$1395; 4-44 Sedan \$1195; 4-44 Coupe \$1175; 4-44 Roadster \$1145; 4-44 Touring \$1145.]

AUBURN AUTOMOBILE COMPANY, Auburn, Indiana



Sales and Service Reference Number

MOTOR AGE
MAY 6th
ISSUE

*Of Exceptionally High Reference Value—Used Daily
—Lives for a Year. Following Are Indications of
Editorial High Spots*

¶**The Best Years are Ahead**

Leading editorial, reviewing briefly the progress of the automotive industry and looking into the boundless possibilities for profit that lie ahead.

¶**101 Ways to Make Money in the Automotive Business**

- 25 Money Making Used Car Ideas.
- 25 Money Making New Car Selling Ideas.
- 25 Money Making Accessory Selling Ideas.
- 25 Money Making Maintenance Ideas.

The 101st Idea—that's a secret until the issue is out.

¶**More Cars—More Sales**

How the rising curve of registrations leads to greater money making opportunities in all branches of the industry. This includes analysis of registration statistics.

¶**The Big Road—1926 Model**

The modern highway is the real automobile salesman. This article includes record of new highway construction in 1925 and that planned for 1926 in all the states.

¶**Credit a Necessary Accessory in Three Out of Four Sales.**

In 75 per cent of his car sales the dealer gets his pay from the banker. Importance of having satisfactory time payment arrangement. Some typical schedules for salesmen to use.

¶**Launching a Dealership—Surveying the Field and Possibilities**

First article of a series dealing with the problems of the merchant about to engage in new car selling for the first time, or contemplating change of location or line. How to analyze territorial possibilities.

¶**Servicing the 1926 Car**

An article dealing with the new service problems and opportunities caused by oil cleaners, air filters, four-wheel hydraulic and mechanical brakes, balloon tires, and other innovations.

¶**The Flat Rate Manual—10,000 Operations**

1926 revised edition of the *Motor Age* Flat Rate Manual introduced in the SALES and SERVICE REFERENCE Number published last year. This manual will contain prices of more than 10,000 individual repair and maintenance operations.

¶**Overhauling the Car for Owner Satisfaction and Dealer Profit**

When and how to overhaul the passenger car under present-day conditions so the owner will be satisfied, and service shop will make a profit. Lower prices for better new cars have changed this situation. In this article will be indicated the limit beyond which it does not pay either from the standpoint of owner satisfaction or dealer profit to put money into overhauling.

¶**Installation, Replacement and Adjustment of Timing Chains**

A complete treatise of this subject from the maintenance standpoint.

¶**New Car Directory**

A compilation showing what there is to sell in the passenger car field. Last year's table brought up to date.

¶**Some Things to Sell**

Table showing accessory and equipment items LACKING on various models of leading makes of cars as they come from factory to dealer.

¶**Electrical Equipment on 1926 Passenger Cars**

A two-page table.

¶**Miscellaneous Tables and all Regular Features**

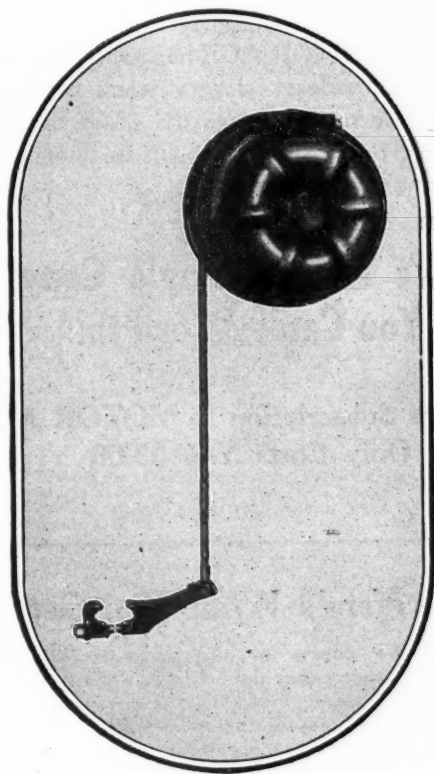
It will be an issue of exceptional value to advertisers who want to impress the nation's consequential dealers and service station owners

For rates, etc., please address

MOTOR AGE
5 South Wabash Ave., Chicago



Keep your seat!



*The Original Snub-
bing Device with
the Steel Cable*

with
BURD
GILMAN
SHOCK ABSORBERS

Spring is here. Thousands of new cars are going on the market daily. Old ones are being rejuvenated. Right now the owners are interested in riding comfort and personal safety—more so than they will be later on. Right now they are interested in the things a good shock absorber will do.

Most drivers have learned that personal safety and car performance are contingent upon proper equipment. They know when a car slips into a hole, the springs go down—the recoil slams them against the top, momentarily endangers car control, and puts unnecessary strain on vital parts. The Burd "Keep Your Seat" story has told many the remedy; they expect you to fill the prescription.

Burd-Gilman Shock Absorbers are scientifically made. A sturdy steel cable, securely housed against the elements, does the work—does it well. It never wears out—requires no servicing—is inexpensive for the customer but a profit-maker for the dealer—can be stocked at a minimum investment.



BURD HIGH COMPRESSION RING CO.

Rockford, Illinois

Makers of the Famous Burd Piston Rings



EVERYWHERE



Rod E. Conomy makes
Regular Friends!

WATKINS Re-
babbitted Rods

will help you satisfy the most
critical car owner.

WATKINS
Complete REBABBITTING
SERVICE

Connecting rods rebab-
bitted and rebuilt to car
manufacturers' specifica-
tions — correctly ma-
chined and broached to
size.

HOME OFFICE: Wichita, Kansas

NEW YORK 33 W. 60th St.	CHICAGO 57-61 E. 24th St.	LOS ANGELES 1007 E. 9th St.
PORTLAND 14th and Everett St.	WASHINGTON 1322 14th St. N. W.	MEMPHIS 278 Washington St.
INDIANAPOLIS 19 W. South St.	TOLEDO 1942 Putnam St.	TORONTO, CANADA 122 Adelaide St. W.
DENVER 1818 Blake St.	SEATTLE 725 E. Pine St.	ST. LOUIS 4216 W. Easton Ave.
HARTFORD 28 High St.	SYRACUSE 211 Wyoming St.	CLEVELAND 5109 Euclid Ave.
OMAHA 1006 Douglas St.	PITTSBURGH 5706 Harvard St. E.E.	WATERLOO N. E. East 4th St.

An approved
National Service



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The very next issue may contain an idea that will be worth many times the price of a subscription! But unless you get a copy of next week's issue, the idea will never mean anything to you!

Every week MOTOR AGE has something new to offer its readers! Every week the automotive trade moves forward! And the man who doesn't read and keep up to date is the man who gets left behind!

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A Year's Subscription to MOTOR AGE
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Fifty-two copies of the only weekly maintenance paper published in America. A weekly news service that is always up to the minute—all the news while it is news.

The right to use the Readers' Clearing House whenever you have a problem that needs personal attention—a service that is alone worth more than the cost of the magazine.

The real facts as to how other men are succeeding in a business just like yours. Proven ideas from all over the country—new ones every week.

New car descriptions the minute they are released.

Mechanical specifications, prices, and weights of all American cars brought up to date every week.

*Subscribe now
and be sure of
getting a copy!*

KESTER Self Fluxing SOLDER

Simple, Safe and Sure
Requires Only Heat



KESTER Acid Core SOLDER

For general soldering and heavier electrical work. Self Fluxing—"Requires Only Heat." Standard size No. 3 about 1/8 inch in diameter, runs about 30 feet per pound. Packed on 1, 5 and 10 pound spools. Special gauges also available.



Kester Metal Mender The Household Solder

Here is the small package of Acid Core Solder. So simple anybody can use it. Ten cans about 1/4 pound each are packed per carton. Ten cartons (100 cans) to the case lot.



Kester Rosin Core Solder

For very delicate electrical and radio work. Contains highest quality metals and rosin flux. Standard size about 3/32 inch in diameter, runs about 50 feet per pound. Packed on 1, 5 and 10 pound spools and 18 inch sticks in 5 pound boxes. Special gauges also available.



Kester Radio Solder (Rosin Core)

Safe, Sure and Simple—approved by radio engineers. Harmless to the most delicate parts. Absolutely non-corrosive flux makes low-loss joints. Ten cans about 1/4 pound each per carton. Ten cartons (100 cans) to the case lot.

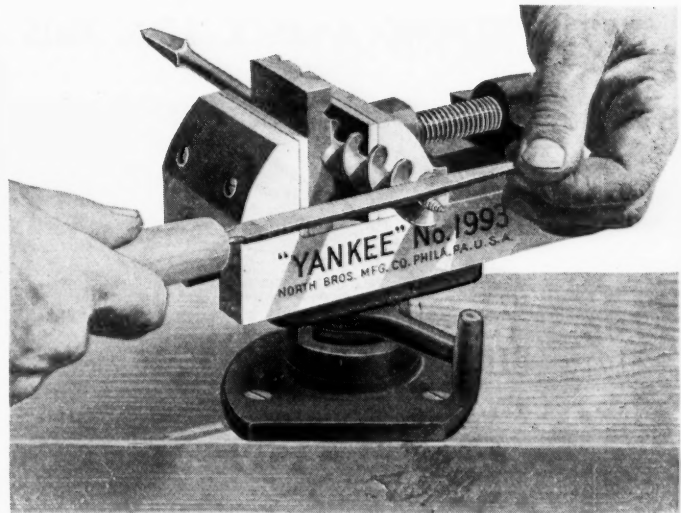
GENUINE SOLDER

CHICAGO SOLDER COMPANY

4203 Wrightwood Avenue, Chicago, U. S. A.

Originators and world's largest
manufacturers of Self Fluxing Solder

Your Jobber Can Supply You



The Handiest Vise for Garage Work

You can do work with this "Yankee" Vise that is impossible with any other—and do it with speed, accuracy and ease.

Not only has a swivel base so you can turn it around in any position, but detaches from its base.

You don't have to remove work from vise until entire job is completed—simply lift vise, work and all, off base, and carry to drill press, milling machine, etc.

Sides, ends, bottom and top are machined true.

Hardened steel block with V-shaped grooves of various sizes holds round or irregular work.

You can get the size most convenient for your work.

No. 1991—Jaws open, 1 1/2"

No. 1992—Jaws open, 2"

No. 1993—Jaws open, 2 3/4"

No. 1994—Jaws open, 4"

Dealers everywhere sell "Yankee" Tools.

"Yankee" on the tool you buy means the utmost in quality, efficiency and durability

Some other "Yankee" Tools

Brake Lining Cutter
Ratchet Tap
Wrenches
Ratchet Screwdrivers
Automatic Feed
Bench Drills
Automatic Feed
Chain Drills
Ratchet Breast and
Hand Drills



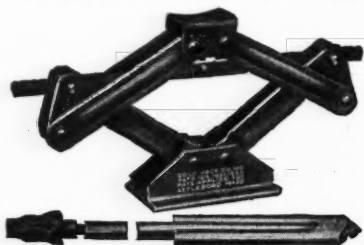
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NORTH BROS. MFG. Co., Philadelphia, U. S. A.

"YANKEE" TOOLS
Make Better mechanics

NEVER BEFORE A JACK LIKE THIS



THE SKY IS NOT FULL OF BALLOONS
—BUT THE ROADS ARE !!!

And there is one Jack that is a true
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The MASTER
SO-LO Jack

All Steel. Down to 4 3/4". Up to 15 1/2"
New and powerful lifting principle
36" folding telescoping handle

LIST PRICE \$6.00

West of Mississippi \$6.50

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Boston, Mass.

Export Agents: American Steel Export Co.

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I'D HAVE PAID \$10 FOR THAT
TOOL SAID ONE MOTORIST!

"Never again will I take a trip without a Wallace Combination Jack and Rim Tool. I'd have given a Ten Spot for one on my last trip." Removes tires in pinch with no labor at all. Ball-bearing jack, with attachments to fit all split rims any style or size.

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At our low price you will find this Combination tool the biggest seller you ever had. A leader with Chicago's leading stores. Extra large profits. List price F. O. B. Chicago \$4.50. Motorists can secure this tool by sending \$1.00 with order direct if dealer cannot supply you. Balance C. O. D.

DEALERS—Be first in your town to handle this big leader. Write for special liberal discounts.

WALLACE RIM TOOL AND MANUFACTURING CO.
24 So. Clinton St. Dept. 104 CHICAGO, ILLINOIS



FOLLETT'S NEW MODEL TIME STAMP

accounts for every labor minute



Learn the interesting details from our descriptive data.

Prints the year, month, day, hour, minute, A.M. or P.M. at the exact moment the plunger is pressed—like this, for example:

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Tells when a job is started—and when it is finished. There can be no dispute over the time charge.

Absolutely automatic—except for winding. Every machine guaranteed.

Follett Time Recording Co., 217 High Street, Newark, N. J.

"Established Since 1904"

Statement of the Ownership Management, Circulation, Etc.,
Required by the Act of Congress of August 24, 1912

Of MOTOR AGE, published Weekly at Chicago, Illinois, for April 1st, 1926
STATE OF Illinois }
COUNTY OF Cook } SS.

Before me, a Notary Public, in and for the State and County aforesaid, personally appeared C. A. Musselman, who, having been duly sworn according to law, deposes and says that he is the Business Manager of MOTOR AGE, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 411, Postal Laws and Regulations, printed on the reverse of this form, to-wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:
Name of Post Office Address
Publisher CHILTON CLASS JOURNAL COMPANY, 5 S. Wabash Ave., Chicago, Ill.
Directing Editor Julian Chase, 56th and Chestnut Sts., Philadelphia, Pa.
Managing Editor Sam Shelton, 5 S. Wabash Ave., Chicago, Ill.
Business Manager C. A. Musselman, Merion, Penna.

2. That the owners are: (If the publication is owned by an individual his name and address, or if owned by more than one individual the name and address of each, should be given below; if the publication is owned by a corporation the name of the corporation and the names and addresses of the stockholders owning or holding one per cent or more of the total amount of stock should be given.)
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3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (if there are none, so state) NONE.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company, but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and that said affiant has no reason to believe that any other person, association or corporation has any interest, direct or indirect, in the said stock, bonds, or other securities than as so stated by him.

C. A. MUSSELMAN, Business Manager.
Sworn to and subscribed before me this 30th day of March, 1926.

(SEAL)

JOHN R. HANNON,
(My commission expires January 27, 1930.)

STAR BALL RETAINERS

for Thrust, Magneto and Cup and
Cone Types of Bearings



**THE BEARINGS COMPANY
OF AMERICA**

Lancaster, Pa.

Western Sales Office, 1012 Ford Bldg., Detroit, Mich.

MORRISON
Automatic Double Range
**Worm Drive
JACKS**



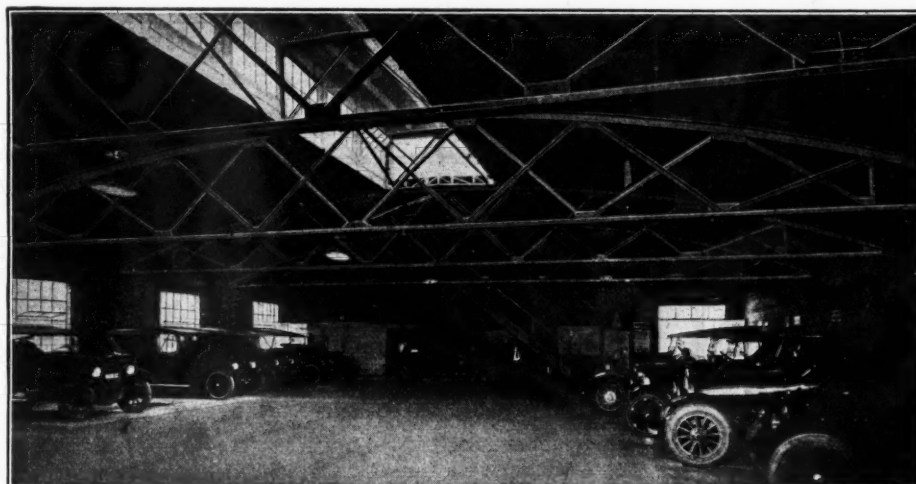
Special model
for Balloons

Can't Slip or Tilt

Flexible steel "Sure Hold" cap prevents dangerous slipping. Long folding handle (36 to 72 in.) operates from standing position. Gets under overhanging bodies. Easy to work. Few turns and it's up. Built in 11 sizes for all service requirements up to 8 tons. Furnished as standard equipment on fine passenger cars, trucks, buses and Fire Apparatus for past 4 years. The Jack for YOUR shop. Write for sample for test.

THE WOODS ENGINEERING CO., Alliance, Ohio

Better Trusses for Less Money —MESKER— STANDARD



Seventy feet clear span—Mesker standard Bowstring Steel Roof Trusses.

Have you ever considered how expensive an automobile would be if only one were made from a set of plans? Steel Trusses have always been built that way—each job special and made to order.

We are making hundreds of trusses from one design, producing them at low cost with special equipment and production methods. We have cut the cost. That's why we say—

Better Trusses for Less Money

Our Standard Trusses are made any length from 35 feet to 102 feet 6 inches. They are one-tenth of the span in height, i.e., fifty feet long trusses are five feet high. Send for free catalog. We will quote if you will send the dimensions of your building.

Bowstring Steel Roof Trusses

It is now possible to span wide buildings at a very low cost.

With our new method of manufacture there is—

Ample strength but no waste of material

High class workmanship but no waste of labor

Prompt delivery because there is no "red tape".

Recent buyers:—

J. L. Parsons, Washington, D. C.	11
Smith Motors, Deland, Fla.	12
Koehler Bros., Saginaw, Mich.	6
McDonald Garage, Zanesville, Ohio	6
Geo. Kamm, Racine, Wis.	6
Sinclair Refining Co., Charleston, S. C.	21

We ship everywhere.

Geo. L. Mesker & Co.
28 Ingle St.
Evansville, Indiana.

"Better trusses for less money"

Send me your catalog with suggestive garage plans.

Quote Mesker Standard Bowstring Steel Roof Trusses for building.....ft. wide
.....ft. long.

No obligation on my part.

Name

Address

A Continued Story of the Industry

READING MOTOR AGE every week is very much like following the growth of the automotive industry in story form.

It is as interesting as a fiction serial, and instructive to the point of making better and more prosperous dealers.

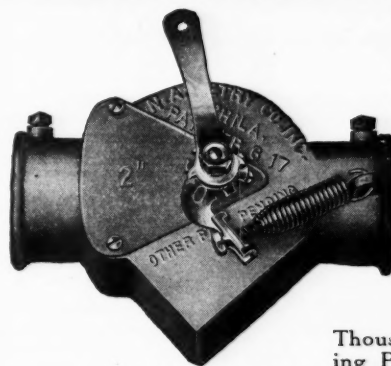
Reading MOTOR AGE every week when it comes, assures subscribers that they will stay up to date and profit accordingly.

MOTOR AGE

5 So. Wabash Ave.

Chicago, Ill.

Not Sold as a Noisemaker



Scientifically Built for ONE Purpose

Thousands of dealers are selling Petrys on what they do—not on the basis of a noisemaker. They are selling them on the fact that Petrys detect engine troubles instantly—that they are scientifically constructed for that purpose and fulfill it to the highest degree. As a result they are selling more of them, more easily.

Petry Tuning Up Valves, pedal or dash operated types, are smooth in operation, do not chatter, leak or rattle and cannot open accidentally. Sold at a good profit—and make another profit on installation.

If your jobber can't supply you, write us direct.

N. A. PETRY CO., INC.

340 N. Randolph St., Philadelphia, Pa.

Pacific Coast Representative
NORMAN COWAN CO.

445-451 Rialto Bldg., San Francisco, Cal.

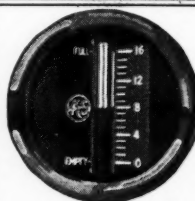
PETRY Tuning Up Valve



flatlight

HEADLAMPS & REFLECTORS
Bring daytime safety to nighttime driving.

THE AMERICAN FLATLITE CO.
Reading Road at Dandridge St., Cincinnati, Ohio



The K-S GASOLINE Telegage

A gasoline gauge on the Dash. Note full page ad in colors in this week's Motor Age, also half page Saturday Evening Post, April 17. Write for description and proposition to the trade.

KING-SEELEY CORPORATION
298 Second Street, Ann Arbor, Michigan
Chicago Branch, 2450 Michigan Boulevard

Made in many sizes to meet any and all requirements in garage, tire repair shop and filling station. Six types: Two Stage, Single Stage, Air Cooled, Water

Cooled, Stationary, Portable. Our low prices enable you to get a Compressor for a small investment. Send for literature.

The United States Air Compressor Co.

5304 Harvard Ave.

Cleveland, Ohio



They Won't Come Back

Those jobs won't come back showing oil passing, compression loss and crank-case dilution if you use a Hall Hone. The Hall makes cylinders both round and parallel. Ask your jobber.

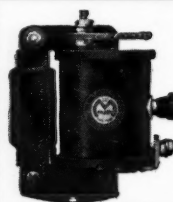
THE HALL MFG. COMPANY
504 Hall Bldg., 1600-06 Woodland Ave.
Toledo, Ohio

ZENITH

CARBURETOR

**More Power
Less Fuel**

Zenith - Detroit Corporation, Detroit, Mich.



Mallory

Ignition Coil

Has two primary windings instead of one. Gives a hotter spark, makes easier starting, gives more power, quicker pickup and more mileage. Try it on a sluggish motor. Write for full particulars.

The Mallory Electric Corporation, Toledo, Ohio.

Transmissions
and Clutches



Trucks, Busses
Passenger Cars

QUICK SERVICE ON COMPLETE UNITS OR PARTS

BROWN-LIFE GEAR CO.

SYRACUSE, N. Y.

BOLTS BLUE PRINT BUSHINGS

"Made to Blue Print"

"Bp"

guarantees to the Replacement Trade the same high standard of Quality and Accuracy demanded by the car manufacturer.

"Bp"

The Fostoria Screw Co., Fostoria, Ohio



The tire with the Gum Weld Cushion has become the most favorably talked about heavy-duty tire in America.

So it pays to be an INDIA dealer.

INDIA TIRE & RUBBER CO.,



AKRON, OHIO



**Here's the Way
to Sell Tire Chains**

Let the package they come in display them. By making them easy to buy, you automatically make them easy to sell. Dealers like the WESCO carton. Write.

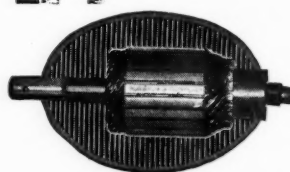
Western Chain Company
Chicago, U. S. A.



UNITED STATES Portable Electric DRILLS

Built by the oldest maker of Portable Electric Drills in the World.

Ask for Catalog 105 **THE UNITED STATES ELECTRICAL TOOL CO.**
Cincinnati, Ohio, U. S. A.



FREDERICKS Rewinding Service

New Rewind Profits—See announcement every 4th week. Write now for price list. The H. M. Fredericks Co., Lock Haven, Pa.

SCHEBLER

The World's
Finest **CARBURETORS**
THE WHEELER-SCHEBLER CARBURETOR CO., INDIANAPOLIS, U.S.A.

free
write for
your copy

**The Book
'AIR PROFITS'**
Shows how to get more work out of an air compressor. How to use compressed air for many pay jobs.

BRUNNER MFG. CO.
UTICA NEW YORK

BRUNNER
AIR COMPRESSORS

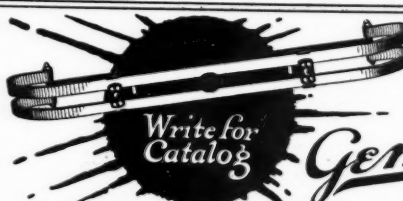
The Original Bosch



Franchise details for selling ORIGINAL BOSCH Automotive Equipment will be sent to any Distributor, Dealer or Service Station on request.

ROBERT BOSCH MAGNETO CO., Inc.
109 West 64th Street New York, N. Y.

ORIGINAL BOSCH units bear the full name, Robert Bosch, and the trade mark shown at left. These are the identifications of Bosch quality—famous since 1887.



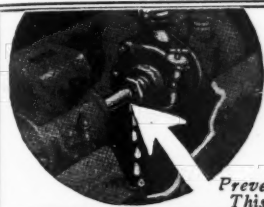
Write for
Catalog

Gemco

Completely Gemco made, the big selling line

GEMCO MFG. CO.
760 S. Pierce St.
Milwaukee, Wis.

BUMPERS



Stops Pump Shaft Leaks Immediately and Permanently

Conneaut Plastic Metallic Packing molds in the fingers to fit stuffing-boxes of any shape or size. It is a repair for the worn shaft and loose bushing. At your Jobbers in 1-pound and 5-pound cans; if not, write us.

CONNEAUT PACKING COMPANY
Conneaut, Ohio

Prevent
This!

"As Silent as a Shadow"

Quincy Compressors

Quincy, Illinois

J-538



Valve Seat Reamer Sets

with the NEW Sioux Reamers! No. 38 set for 90% of all motors. No. 25 for Fords, Chevrolet, Essex 6, Durant, etc.

Your Jobber Sells Them! ALBERTSON & CO.
Sioux City, Iowa

TIMKEN

Tapered ROLLER BEARINGS



Giant Grip Auto-Gram

Beautiful, distinctive initials for the motor car. Nickel-silver with blue Duco background. Guaranteed cement furnished. Stock exchange privilege on letters you do not sell. Free display cabinet with 36 assorted pair. Free counter card with first order. List price \$1 per pair. Write for details and free catalog of entire line of 12 items. Order from your jobber or direct.

RAINBO ACCESSORIES COMPANY
1420 S. Michigan Ave. Chicago, Ill.

FISK TIRES

There's a Fisk Tire of extra value in every size,
for car, truck or speed wagon



PROTEX TIRE CHAINS

Absolutely Stop Skid

Protex Chain Co., Inc. Many small horseshoes grip the road and prevent slip. The first scientific anti-skid device.
Waynesboro, Pa.

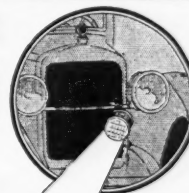
THE WALDEN FORE-LITE

Mounted ahead of the radiator and operated like a spotlight from the instrument board, the WALDEN Fore-Lite satisfies a need hitherto filled by make-shifts. Universal fittings. Selling fast wherever introduced. Ask your jobber, or write us direct, giving his name.

THE WALDEN CO.

2017 S. Michigan Ave.

Chicago



HERE is highest radio quality at lowest price. A chance to get permanent distribution for complete Delano line.

The Delano Sheraton sells for \$75—has built-in Delano loud speaker—5 tubes—special Delano hook-up and mahogany cabinet that completely encloses entire set. Wire or mail coupon today.

DELANO RADIO

Modernola Co., Inc.
Johnstown, Pa.

Gentlemen: Please send me full details.

Name _____

Address _____

The New WEED Levelizer

"Levels the road as you go"

Made by the makers of
WEED CHAINS AND WEED BUMPERS



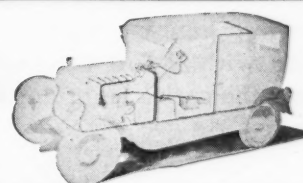
KISSEL

CUSTOM BUILT

Kissel Motor Car Co., Hartford, Wis.

Packard
Cable

The Packard Electric Co.
Warren, Ohio



Curtis Pneumatic
Machinery Co.

1527 Kienlen Ave.
St. Louis, Mo.

TASCO

Gas Gauge for
FORD
CHEVROLET and
OVERLAND



Sells Quick at
\$1.25
Retail

THE AKRON-SELLE CO.
Akron, Ohio

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Attorney-at-Law and Solicitor of Patents
C. L. PARKER

Formerly Member Examining Corps, United States Patent Office

American and foreign Patents secured. Searches made to determine patentability and validity. Patent suits conducted. Pamphlet of instruction sent upon request.

McGill Building, WASHINGTON, D. C.

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AUTO PARTS

SAVES 50% TO 75% ON ALL CARS

New and Used Gears—Springs and Axles—Cylinders—Motors—Rear Systems, etc. Wire or Write

INDIANA AUTO PARTS CO.

608-10 N. CAPITOL AVE., INDIANAPOLIS, IND.
LARGEST CAR WRECKERS IN INDIANA

FOR SALE

FOR SALE: Up-to-date mailing list of North Dakota automobile dealers. For particulars write Box 592, Bismark, North Dakota.

RACING EQUIPMENT

REAL RACE CARS FOR SALE—One Peugeot special; one Hispano special; one 226 cubic inch Miller-8; one 183 cubic inch Duesenberg-8. Zeke Meyer, 3530 Aspen St., Philadelphia, Pa.

WATERVLiet

SPIRAL

KING BOLT

REAMER

*For King or Steering Knuckle Bolt
Bushings on all Cars and Trucks*

Here's a tool you'll welcome,—especially designed to fill a definite need as no other reamer can.

Watervliet quality throughout,—and that means a lot. Made sufficiently long so that the *self-cutting* front pilot engages lower bushing before flutes start cutting upper one. Rear pilot acts as guide in upper bushing while lower one is being reamed.

The two holes are reamed in *perfect alignment*, so that the king or steering knuckle bolt drops into place with a full bearing surface along the entire length of the bushing.

A perfect job in one operation with one tool. A size for every car or truck.

They Will Not Chatter

Resharpening Service

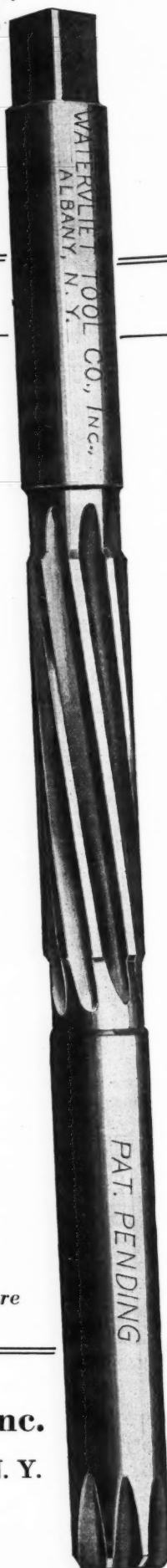
Your Watervliet can be properly resharpened at the factory for a dollar.

Ask Your Jobber or Write for Literature

Watervliet Tool Co., Inc.

1037 Broadway Albany, N. Y.

New York, 1780 Broadway
Kansas City, 711 Mutual Bldg.
San Francisco, 661 Turk St.



Index to the

The Advertisers' Index is published as a convenience and not as a part of the advertising contract. Every care will be taken to index correctly. No allowance will be made for errors or failure to insert.

A. C. Spark Plug Co.....	61	Delta Electric Co.....	53
Akron-Selle Co., The.....	79		
Albertson & Co.....	79		
American Bosch Magneto Co.	65-66	Eclipse Machine Co.....	2
American Chain Co.....	79		
American Flatlite Co.....	78		
Auburn Automobile Company....	71		
		Fisk Tire Co., The.....	79
		Flint Motor Co.....	54
		Follett Time Recording Co.....	76
		Fostoria Screw Co.....	78
		Fredericks, H. M., Co.....	78
Bearings Co. of America.....	76		
Biflex Corp., The.....	62		
Blackhawk Mfg. Co.....	55		
Bonney Forge & Tool Works	2nd Cover	G. H. Tension Ring Co., Inc.....	82
Bosch, Robert, Magneto Co.....	78	Gates Rubber Co.....	56
Brown-Lipe Gear Co.....	78	Gemco Mfg. Co.....	78
Brunner Mfg. Co.....	78		
Budd Wheel Co.....	52		
Bulck Motor Co.....	1		
Burd High Compression Ring Co.....	73	Hall Mfg. Co., The.....	78
		Hudson Motor Car Co.....	Front Cov.
		Hydraulic Brake Co.....	47
Cadillac Motor Car Co.....	49		
Chevrolet Motor Co.....	3rd Cover	India Tire & Rubber Co.....	78
Chicago Solder Co.....	75		
Chrysler Sales Corp.....	8		
Classified Advertising Section..	79		
Conneaut Packing Co.....	79	King-Seeley Corp.....	57-58
Curtis Pneumatic Mach. Co.....	79	Kissel Motor Car Co.....	78

e Advertisements

Lupton's, David, Sons Co.....	59	Sherwin-Williams Co.....	68
		So-Lo Jack Co., Inc.....	76
		Studebaker Corp., The.....	5
		Stutz Motor Car Co.....	4
Mallory Electric Corp., The.....	78	Thomas Auto Top Co.....	64
McQuay-Norris Mfg. Co.....	69	Thomson Mfg. Co.....	50-51
Mesker & Co., Geo. L.....	77	Thordarson Electric Mfg. Co....	81
Modernola Co., Inc.....	79	Timken Roller Bearing Co., The	79
Motor Wheel Corp.....	Back Cover		
Multibestos Co.	58		
Nash Motors Co.....	6		
National Used Car Service.....	67	U. S. Air Compressor Co.....	78
New Departure Mfg. Co.....	7	U. S. Armature & Motor Service	63
North Bros. Mfg. Co.....	75	U. S. Electrical Tool Co.....	78
Packard Electric Co., The.....	79	Walden Co., The.....	79
Petry Co., Inc., N. A.....	77	Walker Mfg. Company.....	70
Prest-O-Lite Co., Inc., The.....	60	Wallace Rim Tool & Mfg. Co....	76
Protex Chain Co., Inc.....	79	Watervliet Tool Co., Inc., The..	80
		Watkins Rebabbiting Service, The.....	74
		Western Chain Company.....	78
		Wheeler-Schebler Carb. Co.....	78
		Woods Engineering Co.....	76
Quincy Compressor Co.....	79	Wright Mfg. Co.....	3
Rainbo Accessories Co.....	79	Zenith-Detroit Corp.	78



When it rains— it Purrs!

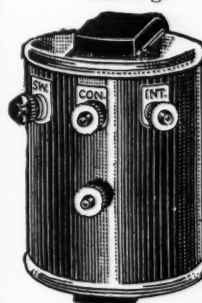
The harder the conditions of operation, the more a car needs Primax Ignition.

Water—mud—oil—grease—heat—cold.

They mean nothing to this transformer that takes the place of any spark coil and that's guaranteed for the life of the car.

The windings, the condenser, then the whole unit, all are separately insulated under vacuum. And that's only one of the twenty-seven reasons why Primax is the world's most reliable ignition.

Write for the booklet, "Transformer Ignition," and learn of the other twenty-six reasons for Primax power, speed, pick-up and ease of starting.



THORDARSON PRIMAX IGNITION

THORDARSON ELECTRIC MANUFACTURING CO.
Transformer specialists since 1895
WORLD'S OLDEST AND LARGEST EXCLUSIVE TRANSFORMER MAKERS
Chicago, U.S.A.

THORDARSON ELEC. MFG. CO.
500 W. Huron St., Chicago, Ill.

Send complete sales information on Primax Ignition.

Name

Address

IT'S THE METAL! NOT THE DESIGN

As soon as the inner ring under a regular piston ring loses its tension it is worthless. Efficiency lies in the metal.

The G-H Tension Ring, as its name implies, is a *tension ring*—not merely a shim. They are built by pioneers in the manufacture of this type of ring; made from the highest grade alloy steel obtainable and *tempered in oil* by our own special process. They will not lose their original resiliency and tension under the most severe working conditions.

G-H Tension Rings, fitted under regular rings, automatically centralized the piston and stop piston slap. They hold the piston ring snugly against the cylinder wall and prevent oil pumping and loss of compression, restoring power, speed, silence and economical operation.

It is not necessary to rebore slightly out of round cylinders—put in G-H Tension Rings. Good mechanics have been using them for years. Easy to install and Profitable. Three sizes fit 90% of the cars in operation.

An attractive Counter Carton containing 300 G-H Tension Rings is put up for the convenience of the dealer and garageman.

Get genuine G-H Tension Rings from your Jobber or write direct.

G-H Tension Ring Company, Inc.

6 and 8 East Mount Royal Avenue

Baltimore, Maryland



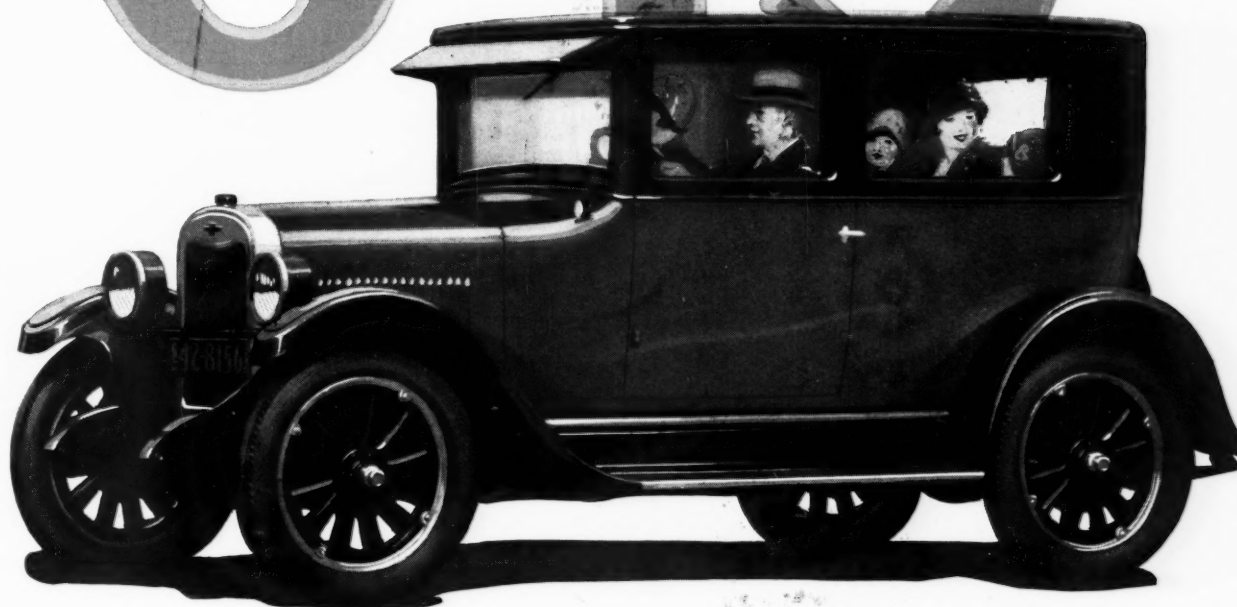


for Economical Transportation

The Coach

\$645

f. o. b.
Flint,
Mich.



Chevrolet dealers have the advantage of selling a closed car that is recognized everywhere as the greatest coach value in the world.

With a fine Fisher Body finished in lustrous Duco, with a luxurious interior—a valve-in-head motor, famous for smoothness and power—selling for only \$645, it enables Chevrolet dealers everywhere to meet the public demand for a closed car combining modern design, modern appearance and low first cost.

CHEVROLET MOTOR COMPANY, DETROIT, MICH.

Division of General Motors Corporation

Touring - \$510
Roadster - 510
Coupe - - 645
Sedan - - 735
Landau - - 765
½ Ton Truck 395
 (Chassis Only)
1 Ton Truck 550
 (Chassis Only)

*All Prices f. o. b.
Flint, Michigan*

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"Here is the car we are going to build. Equip it with the right wheels."

Those are the "specifications" to which Motor Wheel works for many of the greatest automobile manufacturers.

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